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*Some Phases in the Development
of the Subjective Point of View
during the Post-Aristotelian Period*

By
DAGNY GUNHILDA SUNNE

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SOME PHASES IN THE DEVELOPMENT
OF THE SUBJECTIVE POINT OF VIEW DURING
THE POST-ARISTOTELIAN PERIOD

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I. INTRODUCTION

I. THE DIFFERENCE IN PHILOSOPHIC STANDPOINT BETWEEN ARISTOTLE AND ST. AUGUSTINE

In St. Augustine's philosophy the starting-point is the same as in the beginning of modern thought, namely, the certainty of inner experience. Not even the Skeptic, says St. Augustine, can doubt sensation as such; moreover, this very experience reveals not only the content that had formed the basis of relativistic or positivistic interpretations, but also the conscious self, the perceiving subject. For Aristotle and his contemporaries, perception was essentially a cognitive process, apprehending the forms of sensible objects without the matter. Such apprehension of external objects was regarded as direct, the awareness as awareness of the objectively real character of things. A mind as such perceiving was foreign to their modes of thinking; the person, composite of body and soul, thinks and knows, was their view. There is ample evidence that self-consciousness was recognized by Plato in his theories of sensation; and that Aristotle made a psychological analysis of it as a mental phenomenon, though he utterly disregarded it in his metaphysics and epistemology. In the earlier period, therefore, mind was studied in its manifestations in nature and society; with the close of ancient speculation, the investigation was based predominantly on introspection and the analysis of mental operations of the individual thinker. It is accordingly an interesting inquiry how this change of viewpoint was effected and what were the consequent alterations in scientific method. Though such a development cannot be treated in isolation from the social life, the scope of this paper will allow only most general and cursory references to the social, political, and religious influences affecting the philosophic thought of the post-Aristotelian period.

2. INDICATIONS OF INTEREST IN INNER EXPERIENCE DURING THE PRE-ARISTOTELIAN PERIOD

The Ionian philosophers viewed physical reality as a concrete whole; there was no antagonism between human nature and universal nature in either theory or practice. Heraclitus revolted from the conception of the world established by tradition and the theories of teachers, over against which he set up the claims of reason. To the "obscure philos-

opher" scientific research was difficult; for he believed there is an idea expressed in things, a meaning which it is the aim of philosophy to bring to light. It seemed to this ontological idealism that the strife and discord discernible in nature, which had been first mentioned by Anaximander, is an expression of a deeper harmony. Thus the notion of illusion developed, because the hidden harmony was regarded as more perfect than the apparent. In this early development of philosophy also, progressive emphasis was laid on the impersonal element in nature till in Democritus the gods were abolished. On the other hand, the system of Parmenides which influenced to a marked extent the thinking of his successors made no attempt to explain or even describe nature, but endeavored to clarify an idea that should be the permanent truth about things.

Athwart this philosophic development came the humanistic movement of Sophism. The Sophist discovered the world to be himself and hence all inquiry had a personal aim. Doubting any positive knowledge of the world of nature, he turned to the more comprehensible life in society. Now appeared the first attempt at a study of mind, which was further developed by Socrates. Thus the Sophists from an individualistic, and Socrates with his followers from a universalistic standpoint investigated the human mind in its social aspect.

Though the distinction between sensation and reason was early made in Greek philosophy, metaphysical interests predominated. All mental processes were conceived as material operations. In its origin Greek psychology was a division of physics or physiology. Cognition was considered a property of the matter composing the human organism. Empedocles first touched on the distinction between sensory and physical facts in his doctrine of symmetry and similarity between object and sense-organ. He attempted to exhibit a common element in the various kinds of sense-perceptions but denied any fundamental difference between them and physical processes. Yet from his time on, two opposite standpoints are apparent in philosophy: the assertion or the denial of a fundamental distinction between physical interaction and sense-perception.¹

In accordance with his physical theories, Democritus regarded thought and sensation as bodily changes because he had observed that both these activities depend on the organism. The distinction between *λόγος* and *αἴσθησις* had already been drawn. Therefore, there must be two regions of knowledge: one dealing with an intelligible world—the formation of things from atoms—the other with sense-perceptions. All

¹ Cf. Beare 294-95.

sensations were explained in terms of direct contact and mechanical manifestations of pressure and impact. Thinking was supposed to take place when the soul-atoms are harmoniously united. Thus the difference between sense and thought processes was held to be that of impact versus organized physical movement. So Democritus tried to formulate the principle to which pure knowledge must conform and to state it as a relation of concepts to sense-perception, not in terms of subjective functions but in those of objective contents. It is typical of the thoroughness of Democritus that he attempted on the basis of the atoms to explain the world as perceived and thought out. In the previous systems, the differences between the two realms had been pointed out and made irreconcilable. Democritus tried to give a thoroughly scientific explanation of their connection, that is, of mind and its relations, from the physical side.

Plato on the other hand was the first philosopher to demarcate sense-perception from physical reaction by defining sensation as a movement common to soul and body. Here sensation signifies any immediate consciousness, perception including pleasure-pain. He contended that sensationalism cannot account for the synthesizing activity of thought and rejected psychological analysis based on physical analogies. We find in Plato an opposition not so much between soul and body as between thought and sense—one faculty over against another. Against the Protagorean theory that sensible objects possess their so-called attributes only by acting and being acted upon in the interplay of object and sense-organ, Plato insisted that the defects of sense are not in the perceiving subject but in the object, for the particulars of sense are incessantly changing. No scientific treatment of psychological problems is given, though there are numerous examples of introspective analysis unequalled for keenness and subtlety. For the metaphysical and ethical implications of mind as objectified in society viewed from a spiritual standpoint formed the chief subject of investigation.

3. DEVELOPMENT OF BIOLOGICAL PSYCHOLOGY AND REALISTIC EPISTEMOLOGY BY ARISTOTLE

The construction of a thoroughly realistic epistemology based on a correlation of physics with psychology was one of the achievements of Aristotle. In accordance with his teleological standpoint he deals in his psychological treatise with soul as belonging to all animate beings. Soul as such he considers a mere logical entity. It is possible to give a purely generic definition of soul as of geometrical figure, but there is

nothing corresponding to it apart from the particular kinds of soul.¹ Aristotle criticizes severely the treatment of mental processes in the abstract as well as the limitation of observations to the human soul. It is the embodied individual that is the subject under consideration. The view of the soul as an entity is vigorously opposed; the soul is simply the *εἶδος* of a concrete living being. It is not the soul that learns and pities; man learns and pities with his soul.² And yet Aristotle speaks of the soul as the subject of sensations, feelings, and thoughts; and the very fact that he so often refers to a central organ apparently signifies a tendency to locate some peculiarly psychical part.

Activity is the basal principle of Aristotle's psychology just as motion is fundamental in his physics. His theory implies that a process of the human organism is of the same kind as some motion in the external world. When a movement is caused by the stimulation of the sense-organs, the form of the external object is communicated to the organism. The content of sensation or thought, whether in the sense-organ or in the physical world, is equally objective. Aristotle believed that the assertion of the relativity of perceptions and the denial of the objective validity of sense-qualities on the part of earlier philosophers were due to their failure to distinguish the ambiguity of the terms sensation and sensible thing. "When they mean the actual sensation and the actual sensible the statement [that without seeing there is neither white nor black, without tasting no flavor, etc.] holds good; when they mean potential sensation and potential sensible this is not the case."³

According to Aristotle the first two stages of cognition, sense-perception and reproductive imagination,⁴ furnish the content of common-sense; this same content, regarded as potential, is the passive reason on which creative reason operates. Aristotle received the groundwork of his theory of sensation from Plato. He defines it as the transmission of some stimulus or impression through the body to the soul.⁵ In this manner he connects physics and empirical psychology. By means of his physical theories of motion, efficient cause, matter and form, potentiality and actuality, he demarcates sensation from physical interaction and explains the relation of sensation to sense-organ, and of perceiving subject to sensible object. In the reception of the form of a thing without the matter, object and act are correlative; they can be distinguished logically, though in the perceptive process they coincide.⁶ The par-

¹ *De An.* 413-15, a13.

² *Ibid.* 408, b12.

³ *Ibid.* 425, a20.

⁴ *φαντασία*.

⁵ *De Somno* 454, a7.

⁶ *De An.* 425, b26.

ticulars of sense are restricted to some special quality. To explain a complete act of sense-perception Aristotle had recourse to the *sensus communis*, the common unifying and discriminating function of sense,¹ to which was ascribed the comparison of sense-data, the apprehension of the common sensibles and of concrete objects and reflective consciousness, imagination, and memory. The objects of sense-perception, classified as specific, common, and incidental, are all treated as present data and as given elements in sensuous experience.²

As a fundamental principle of his account of *φαντασία*, the faculty of reproductive imagination,³ Aristotle posits the frequent persistence of sense-impressions. The stronger affections of the sense-organs overcome the weaker so that these are only potentially present in the sense-organs until brought to consciousness by being conveyed to the organ of central sense.⁴ Hence sensuous impressions⁵ and images⁶ are identical as to content and differ in function alone. "When the stimulus occurs, it imprints as it were a mould of the sense-affection, exactly as a seal ring acts in stamping."⁷ Then in regard to images:

As the animal depicted on the panel is both animal and representation, and, while remaining one and the self-same thing, is both these, though in aspect of existence the two are not the same, and we can regard it both as animal and copy; so, too, the image in us must be considered as being both an object of direct consciousness in itself and relative to something else a copy.⁸

By means of the fact of error Aristotle discriminated sense from thought,⁹ just as he distinguished *φαντασία* from both these processes by reference to belief.¹⁰ Thought both in its discursive and in its intuitive function is analogous to sense-perception.¹¹ In actual thinking the universal and intelligible element implicit in the sensible, it was held, becomes explicit. Thought dealing with universals discovers its objects within itself, while sense-perception receives its stimulus from particular external objects. Though nothing exists self-dependent but the extended objects of sense-impression, concepts in which essence and existence are identical are also *οὐσίαι* in a sense.¹² Such simple ultimate concepts

¹ *Ibid.* 425, a13-21; *De Mem.* 450, a12.

² *De An.* 418, a7-25, 428-29.

³ *Ibid.* 428, b9.

⁴ *De Insom.* 459-61; *De Sensu* 447, a15.

⁷ *De Mem.* 450, a31-b4.

⁸ *Ibid.* 450, b23-451, a24; cf. Spinoza *Eth.* II, 16.

⁹ *De An.* 427, b1-5.

¹⁰ *Ibid.* 427, b5-428, a16.

⁵ *αἰσθήματα.*

⁶ *φαντάσματα.*

¹¹ *Ibid.* 426-27, a.

¹² *Ibid.* 429, b12.

form the starting-point of science. The mind can deal only with forms of sensible objects or concepts realized in them. Hence images must be present in the absence of concrete object,¹ and the perceptual form becomes the matter of such concepts as cannot exist apart from the continuity of such context. The objective counterparts² of these conceptions have their concrete existence in the sensible forms of objects. The universal was thus regarded as potentially immanent in the concrete particular, and hence reason discovers its content both in itself and in the perceptual world. Aristotle held that it is impossible to know whether the subjective affections are qualitatively alike in two individuals or species; but when the objective content is identical, it must be assumed that the affection is the same. The sensation as immediate experience varies with the individual, but as quality is identical for all.³ Aristotle states the gist of his psychology and epistemology as follows:

Somehow the soul is all existent things. For they are all either objects of sensation or objects of thought; and knowledge and sensation are in a manner identical with their respective objects. . . . Knowledge and sensation, then, are subdivisions to correspond to the things. Potential knowledge and sensation answer to things which are potential, actual knowledge and sensation to things which are actual. . . . Since apart from sensible magnitude there is nothing as it would seem independently existent, it is in the sensible forms that the intelligible forms exist, both the abstractions of mathematics as they are called and all the qualities and attributes of sensible things.⁴

Aristotle, therefore, started with the assumption that objects exist and can be known; his problem was how an individual, a bodily organism, functions in knowing. His explanation was that in the act of cognition, the knowable character of the object is in the thinker. Sense is a faculty of receiving the form,⁵ the knowable character or meaning of a thing, and thinking is defined in the same terms.⁶ Hence the εἶδος of the sensible object exists actually only in the process of perception and is identified numerically and specifically with the εἶδος in the soul.⁷

¹ *De Mem.* 450, a12-15.

² νοητά.

³ *De An.* 421, b1-20; *De Sensu* 444b.-446b.

⁴ *De An.* 429.

⁵ *Ibid.* 424, a18.

⁶ *Ibid.* 429, a15.

⁷ *De An.* 426, a15; *Metaph.* 1010, b1-30; (in *De Mem.* 425, b16-17, it seems that the εἶδος exists already realized in the external object).

It is significant for the development of thought in this period, that reflective consciousness was clearly recognized by Aristotle but otherwise disregarded, though Plato had called attention to this mental phenomenon. "A sight which sees itself will be regarded as incredible by some," he remarked; and then added significantly, "though not by others." Aristotle raised the question how we perceive that we see and hear, and his answer was: "There is a common power which accompanies all the special senses and by which the mind perceives both that it sees and hears, since it is not by sight it sees that it sees," but in virtue of a common faculty accompanying the special sensations.¹ Aristotle was also aware of the importance of this form of reflective consciousness. In one passage he says, "He who sees perceives that he sees. . . . We perceive that we perceive, think that we think, and so on. For us our existence consists in this very perceiving that we perceive and thinking that we think."² But all the mental processes from sense-perception up to scientific knowledge deal with their respective objects, and cognizance of their own activity is a by-function.³ In view of the great stress put on will in the post-Alexandrian period, it is of interest to notice that Aristotle made a connection between thought and desire by means of *φαντασία*.⁴ In his treatment of recollection, he speaks of it as a search depending on will, thus recognizing its purposive character. So he also asserted that the distinctions between truth and falsehood made by theoretical reason are generically the same as the objects of pursuit and avoidance of practical reason, good and evil.⁵ But this line of investigation was not further developed. Such a position toward will and reflective consciousness was due to the view held of cognition and epitomizes the great contrast between the philosophical attitude at the beginning and end of the post-Aristotelian period.

4. SCIENTIFIC METHOD BASED ON THIS THEORY OF KNOWLEDGE

As thought is concerned either with recognition and contemplation of truth or with devising rules for producing results, Aristotle held that science must be either theoretical or practical. The first principle of the former disciplines cannot be proved and the end of the latter can form no matter for deliberation. Scientific knowledge of universals

¹ *De An.* 425, b2; *De Som.* 455, a15.

² *N. Eth.* 1170, a29; Beare 289.

³ *πάρεργον*: *Met.* 1074, b35.

⁴ *De An.* 433, a9; *De Mem.* 453, a12.

⁵ *De An.* 431, b10; *N. Eth.* 1139, a26.

is based on experiential knowledge of particulars. True perception is possible and its objects actual;¹ the doubts raised in regard to sense-perception are due to the application made of it.² The object of perception is implicitly universal. "The concrete individual is perceived but the perception is of the universal, as for example, of a man, not of Kallias, a man."³ Ultimate principles are apprehended by induction in the Socratic sense. For sense-perception gives rise to memory which depends on the experienced connection of facts, whether that of contiguity, similarity, or contrast, and "repeated memories of the same object to experience; . . . and experience leads to the principles of art and science."⁴ Psychologically, then, the mind comes by the apprehension of such principles by induction from examples of their truth in concrete cases.

But such induction merely makes possible the direct intuition of the implied principles, but does not prove them; for they are not provable.⁵ "Some first principles are seen by induction, others by perception, others by a sort of habituation, and some in one way and others in another."⁶ By perception or direct insight the first principles of mathematics are recognized. In more complex subjects, especially the physical sciences, the truth of a proposition can be seen only as exemplified in a number of instances. Demonstration or scientific analysis as discussed in the analytics has to do only with middle terms, that is, with causes in the theoretical sciences and means in the practical. At each end of this process recourse must be had to immediate insight whether sensuous or intellectual.⁷ The instrument for getting at mediate propositions is the syllogism which is the only form of proof whether in demonstrative or deliberative analysis.⁸ Hence there are two forms of reasoning, the purely scientific and the inferential.⁹

Empiricism as developed in Aristotle was probably due to his association with medical pursuits, more particularly with the method of Hippocrates who combined remarkable ability of diagnosis with clear insight into the importance of experience. But Aristotle develops and proves his theories not by observation but by reasoning. The observed facts are instances of the general proposition, which when clearly perceived becomes immutable and elevated beyond the possi-

¹ *Met.* iv. 5-6.

² *De An.* 428, b18.

³ *An. Post.* 100, a16; *N. Eth.* 1143, a35.

⁴ *De Mem.* 451, b32; *An. Post.* ii. 100, a.

⁵ *Ibid.* 91, b33.

⁶ *N. Eth.* 1098, b3.

⁷ *Ibid.* 1142, a27.

⁸ *Ibid.* 1139, a6.

⁹ ἐπιστημονικὸν καὶ λογιστικόν.

bility of proof or refutation. Concepts were thus clearly stated and then organized. No mere observation, however, had scientific value. The importance of exactly defined investigation was recognized; but only the completely generalized form was an object of knowledge.

In the pre-Socratic period matter was the knowable phase of nature. With the Socratic movement form became dominant, and through the categories of possibility and realization Aristotle made an important advance on the Platonic ideas by way of biology. It was in this direction that he developed his psychology. Here he deals not with consciousness but only with the objects of consciousness. For a thing has value for knowledge only if it has the form of a universal. In his scientific treatment, then, Aristotle accepted as given in generalized perception the physical phenomena of which the qualities were to be determined. No attempt was made to analyze the immediate object of knowledge into the conditions out of which it arises, or to investigate the different experiences under these varying conditions. The object of knowledge was presented and then known because of its nature. Therefore it could only be analyzed into more ultimate forms of knowledge, until, when the intuition of final objects of cognition was achieved, the goal of science was also attained.

II. DEVELOPMENT OF THE SUBJECTIVE STANDPOINT IN STOICISM

I. INTRODUCTION: SOCIAL AND POLITICAL CONDITIONS; CHIEF PHASES OF THE DEVELOPMENT OF THE SUBJECTIVE ATTITUDE

It was in the period following the death of Alexander, while the Greek world was in a turmoil of confusion consequent on the splitting up of the empire into separate states, that the post-Aristotelian schools began to formulate their position. The main characteristic of the time from 323 to 280 B.C. was the predominance of the individual, as has been forcibly brought out by recent historians.¹ The desires and advantages of the rulers were of paramount importance; the people were disregarded and were rarely able to assert themselves with success. What the generals of Alexander achieved they owed to their own efforts; for the mingling of the various tribes and nationalities under one government left the leaders without the loyal support accorded a chieftain from his own people and forced them to depend on themselves as individuals. The prominent rôle that women played in political events is another indication of increasing significance of personal influence. Another significant fact is that the sovereign claimed divine descent or at least a divine mission in order to gain his ends more easily. While among the Greeks who came under the influence of kings the oriental cults and the deification of the rulers transformed the beliefs of the people, in the independent cities, such as Athens, philosophy attempted in various ways to solve the problems raised by these changes in religious convictions as well as by Skepticism and also in general by the tendency to make momentary benefits the aim of all endeavor. As philosophy thus attempted both to interpret and to direct this great social movement, the individualistic and subjective point of view gradually superseded the objective standpoint just outlined. It was especially in the search for the criterion of truth that the subjective attitude began to emerge.

As a naturalist, Aristotle had viewed the world as a system of specific forms; these complete organisms could be explained by studying the parts in reference to the whole, as means to an end. Thus his investigation of soul was a biological treatise in which development, the transition from potentiality to realization, was the keynote. The underlying motive was the desire to exhibit the universal form in the empirical data

¹ Cf. Holm *Hist. of Greece* IV, chaps. 1-3.

of nature and life, since the universal exists potentially in the concrete. Aristotle's problem was determined by his epistemological position (based on the Socratic concept and the Platonic mediation between ideas and particulars) that universals are the only objects of scientific knowledge and that the concrete particulars, reality in the strict sense, are presented in sense-perception. Hence no regulating principle was demanded or furnished; and the search for it became the dominant problem of post-Aristotelian philosophy.

Discarding the Aristotelian conception of transcendence, the Stoics developed the other side of the latent dualism, the view of the world as an organism, by adopting the Heraclitean notion of primordial fire, eternal, divine, possessed of thought and will.¹ All existing things partake of this divine substance which appears as hold or bond of union in inorganic matter, as vital principle in plants, irrational soul in animals, and rational soul in man.² Together with significant contrasts in ethics the ideal of Aristotle was carried to its logical conclusion; but a new spirit was introduced with the doctrine of universal law and still more by the ever-increasing emphasis on will, self-determination, which involved a practical instead of a theoretical standard of life. The concrete was the object of study; but not the individual in general so much as the particular person. The introduction of assent or acknowledgment into the cognitive process by Zeno was the entering wedge of the subjective standpoint. As the volitional attitude gradually became basal in psychology and epistemology, the need of a standard became imperative. It is possible to trace in the older Stoicism the growing emphasis on assent as fundamental in knowledge, the increasing skill in psychological analysis, while the criterion of truth remained distinctly objective. The problems thus raised were bequeathed to the Middle Stoa; then the stress fell on attention and the need of reason in all forms of knowing was recognized. In later Stoicism the judgment, the interpretation, the "view" became of sole importance. The relation between universal and particular, abstract and concrete, remained a vexing problem while the tendency was ever toward a subjective interpretation of the universal. Thus when the individual as such asserted himself, the will began to be treated as a specific function, just as Aristotle in contrast to Plato had discriminated activity from the other functions of the soul; the more analytic point of view tended toward a transformation of the philosophical attitude.

¹ Arnim I, 37-44.

² Pearson Z. 43; Aurel. *Med.* vi. 14; Sext. ix. 81.

2. ATTEMPTS AT A THEORY OF KNOWLEDGE ON A SUBJECTIVE BASIS
BY THE OLDER STOA*A. Doctrine of Assent with Reference to Sense-Perception*

To the founder of Stoicism ethics was the climax of philosophy; so the study of human nature, individual and social, was basal. Moreover, both his physics and his epistemology were psychological in character. His followers also made valuable contributions to psychology in their treatment of assent, motive, and emotion. Of the eight parts or rather functions of the soul enumerated by Zeno,¹ the five senses and reason were cognitive functions. The cognitive soul in its different activities was conceived through analogy of substance and its qualities by Chrysippus;² but this logical formulation was undoubtedly founded on Zeno's view of the soul as unified activity. The term ἡγεμονικόν was used by Zeno³ and was sometimes identical with ψυχὴ in the narrower sense; as the controlling soul-function it was active reason. With Zeno's insistence on will, all mental processes became species of judgment⁴ and hence the ἡγεμονικόν was for him the soul not only as thinking but as willing. The difference between such a definition and Aristotle's tentative characterization of soul is evident; a step had been taken to shift the emphasis from insight to assent.

Zeno's particular contribution to the theory of knowledge⁵ was, in the first place, the voluntary assent in sense-perception, and in the second, the division of φαντασίαι into two classes, those which are perspicuous and those which are not,⁶ and the formulation of his theory of knowledge on the basis of the former. Sense-perception Zeno defined⁷ as a union of a certain blow or impress from without and the free assent of the mind. There can be no assent unless the mind is excited by a φαντασία which was regarded by Zeno as an imprint or impression in the soul. An external object may affect the senses, but no perception takes place until the mind gives the fiat, admits it as a true perception. It may well be that Zeno, like certain other Stoics,⁸ dominated by his feeling of the power and independence of reason and the clear evidence of presentations under normal conditions, at first deemed it unnecessary to define further what sense-perception is, and believed that those act unwisely who wish to convince a man that there is anything which can be perceived and grasped by the mind, because nothing is more evident

¹ Arnim I, 39.² Stob. *Ecl.* i. 49; Arnim II, 286.³ Pearson *Z.* 93; Diels 471.⁴ Arnim II, 456.⁵ Cic. *Ac.* i. 40.⁶ Cic. *Fato* 42.⁷ Sext. vii. 228; D. L. vii. 45.⁸ Cic. *Ac.* ii. 17.

than this perspicuity.¹ For "perspicuity has such force that it through itself shows us things just as they are." A presentation that possessed this clear evidence peculiar to itself concerning objects given in experience was termed *φαντασία καταληπτική*.² Each brought its own testimony of truth and was naturally accepted by a healthy mind. A matter-of-fact man that he was, Zeno might challenge his disciples to deny the existence and their own knowledge of external objects, maintaining that he did not need to describe their self-evident character, since normal men know and experience them alike. The universe is rational and we are a part of it. Hence what is presented by nature as true must be accepted of its own free assent by the human mind which is a portion of that nature. "Our perceptions of external objects, we believe," said the Stoic,³ "deserve to be embraced for their own inherent worth, because they comprise something which, so to speak, encircles and holds within it the truth."

More analytic procedure was introduced by the Skeptical criticism and the objective characteristics of the criterion were made more prominent without recognition of the difficulties involved in the relation of voluntary assent and object of knowledge. For no sooner had Zeno formulated his doctrine of *φαντασία καταληπτική*⁴ than Arcesilas began to criticize it. Zeno accordingly had to define the expression more minutely:⁵ that the presentation must be from a real object to exclude the phantasies of the insane; it must correspond to that object so as not to produce on the mind the impression that it comes from some other object; and finally, it must be properly imprinted and stamped to insure a presentation of all the details. When the mind assents to, and approves of, such presentations as bear clear evidence of the objects from which the impressions come,⁶ infallible sense-perception occurs. Zeno is represented as comparing the *φαντασία* to the open hand, assent to the slight drawing together of the fingers, and certain perception to the closed fist; when the other hand closely and firmly grasps the fist, we have an illustration of knowledge of which only the wise man is capable.⁷ The exact formulation of the definitions was a matter of gradual growth, but the main position was outlined by Zeno. Perception, he urged, is common both to the wise man and to the fool, as it is not *per se* abso-

¹ Cic. *Ac.* ii. 45.

³ Cic. *Fin.* iii. 17.

² *Ibid.* i. 40-42.

⁴ Euseb. *P.E.* xiv. 6.

⁵ Cic. *Ac.* ii. 77, 18; Sext. *P.H.* ii. 4; vii. 248-49, 255, 402, 410; xi. 183; D. L. vii. 46-50.

⁶ Cic. *Ac.* i. 41; *N.D.* i. 70.

⁷ *Ibid.* ii. 145.

lutely certain knowledge, but becomes such through philosophical training. Therefore, only the wise possess knowledge in the strict sense, which cannot be overthrown by reason.¹ Those who are not wise cannot have knowledge; although they may cognize, their cognition is not welded into a system by dialectic. Hence Arcesilas maintained that Zeno's *κατάληψις* was a mere abstraction, for with the wise it is perfect knowledge, with the not-wise *δόξα* or *ἄγνοια*.² Thus Zeno was the first distinctly to formulate and defend the possibility of certain knowledge on the part of the wise man.³ It is an interesting question how far the view that perfect knowledge is attainable only by the ideal philosopher was with Zeno developed through the exigencies of the controversy with Arcesilas. For the ultimate result of Zeno's tenets was that as there is no mean between virtue and vice, so there is none between ignorance and knowledge. Such was Zeno's solution, maintaining both the criterion as defined and the necessity of voluntary assent.

*B. Objective Character of the Object of Knowledge: Cleanthes
and Chrysippus*

The objective character of the criterion was still more accentuated by Cleanthes and consequently stress was laid on the universal aspect and on the interrelation of all parts of the universe. The parallelism between the macrocosm and microcosm was emphasized by means of the theory of tension. As the human soul is braced by the ever-varying tension, so the cause of motion in the universe is the changing tension of fiery breath which was identified with the universe or God in the pantheistic system to which Cleanthes reduced the dualism that was merely formal in Zeno's philosophy. In harmony with the consistently materialistic and experiential character of his teaching, Cleanthes gave a psycho-physical treatment of Zeno's theory of knowledge. He interpreted Zeno's definition of *φαντασία* as analogous to the impression made by a seal on wax.⁴ The insistence upon the clearness of true perception, compared to the raised and depressed portions of the imprint of a seal, together with the general spirit pervading the fragments, shows what an objectively real thing a sense-impression was to him. Cleanthes, then, likened the *καταληπτική φαντασία* to the clear, sharply indented impression of the seal upon wax, and the *ἀκαταληπτός* he regarded as not clear cut. The analogy was made still more striking by comparing

¹ Cic. *Ac.* ii. 145.

² Sext. vii. 153.

³ Cic. *Ac.* ii. 77, 113.

⁴ D. L. vii. 46.

the clearness of the impression to the raised and depressed parts of the stamp of a seal.

In opposition to Cleanthes, Chrysippus contended that by his definition of *φαντασία* as *τύπωσις ἐν ψυχῇ* Zeno did not mean to liken the impression to the stamp of a seal, but simply intended the expression to signify alteration or qualitative change.¹ It is at least interesting that as in explaining the process of remembering Aristotle gave a different version of the existence of *εἶδος*, so Chrysippus based his criticism of Cleanthes on Zeno's definition of memory as a storing-up of *φαντασίαι*. The objections brought by Chrysippus against the interpretation of Cleanthes are illuminating. In the first place, he said, when a triangle and a square are imaged simultaneously, then the same body must have different shapes in it at the same time—a senseless supposition. Furthermore, when many presentations occur, the soul will assume numerous forms, and this is worse than the first statement. But it is possible that some alteration takes place, as for instance, the air undergoes various changes when many persons are speaking at the same time. Then comes the clinching argument: Cleanthes' view makes memory impossible since the last excitation will blot out the preceding impression.² With memory, all learning and art are also abolished. With his veiled sarcasm Sextus suggests his own doubt as to the advance made by Chrysippus upon his predecessor. Chrysippus had in fact substituted a less definite term and in this fashion covered up rather than cleared away the difficulty.

In this development of the primary meaning of *φαντασία*, Zeno emphasized the shock of sense (to borrow the expression of a recent writer) without distinguishing between the percept and the act of perceiving; Cleanthes confined himself to a psycho-physical interpretation of the term. Chrysippus made a definite distinction between the process and the object, by defining *φαντασία* as "a modification of the soul pointing out also in this very act its cause."³ That such analysis indicated no change in the view of the nature of *φαντασία* in this sense but resulted from the pressure brought to bear by the New Academy is obvious from the account of Sextus who also makes it evident that the distinction between *τύπωσις* and *ἐτεροίωσις* was not considered essential as a matter of terminology.⁴ It signalized, however, a change of view-

¹ D. L. vii. 46; Sext. vii. 227, 372.

² Sext. vii. 232-33.

³ D. L. vii. 48; *Plac.* iv. 12; Sext. vii. 162.

⁴ Sext. vii. 227-41; cf. *τύπωσις* used by Epictetus and M. Aurelius.

point from the psycho-physical to the more strictly psychological problems.

C. Analysis of Cognition on the Basis of Assent: Chrysippus

a) Assent basal in cognitive functions.—While Chrysippus insisted on the objective character of the criterion he also made a more comprehensive analysis of cognition on the basis of assent.¹ The assent involved in all human activity was one of the most characteristic features of Stoic thought. Sense-perception and understanding, the double source of knowledge,² were therefore regarded as fundamentally the same mental power. “The mind itself which is the source of sense-perception and is itself sense-perception has a natural force which it extends to the objects by which it is stimulated.”³ So according to Plutarch:⁴ “The receptive and irrational element is not by nature separable from the rational, but it is the same power of the soul which they call the understanding or *ἡγεμονικόν*.” It is in the spirit of Chrysippus that Sextus says:⁵ “Sense and reason are identical, not in the same respect; in one aspect it is understanding, in another sense-perception. Just as the same drinking-cup is both convex and concave, thus the same understanding is in one aspect sense, in another reason.” But the basis of this mental unity was voluntary assent which was considered the essence of reason as such and which the Stoics made every effort to prove a requisite in sense-perception. No sense-perception without assent, was a statement reiterated under various forms⁶ and upheld with intense persistency by Chrysippus against his critics. Sense-perception is not merely a presentation, it was urged, but depended for its very existence on assent.⁷ Chrysippus in particular contended against the Academy that no act or impulse occurs without assent,⁸ and it was folly to assert that when presentations in accord with nature take place the subject feels an impulse without being willing or assenting to it.

Such analysis necessitated a closer inspection of the term *αἰσθησις* which had become an “omnibus term.” Of the six meanings enumerated,⁹ the important differentiation is that between the process of apprehension and free assent. This discrimination again shows the weight

¹ Cic. *Ac.* ii. 108, 30.

² D. L. vii. 51–52; Sen. *Ep.* 66, 35; Epict. i. 26, 15.

³ Cic. *Ac.* ii. 30.

⁴ Plut. *De Vir. Mor.* c. 3.

⁵ Sext. vii. 307, 359.

⁶ Cic. *Ac.* ii. 37, 108.

⁷ Stob. *Phys.* 834.

⁸ Arnim II, 246.

⁹ *Plac.* iv. 8; Diels 635; D. L. vii. 72.

placed by Chrysippus on volition. As a separate function besides *φαντασία* and *συγκατάθεσις*, the term *αἴσθησις* meant immediate apprehension.¹ In its wider connotation it comprehended the whole process of sense-perception; the first impression of the object in the sense-organ is unconscious and mechanical and becomes perception in the *ἡγεμονικόν* to which the stimulation is conveyed; by assent, absolutely certain perception is obtained. Such technical psychological discrimination, which in its precise formulation began with Chrysippus, had a tendency to substitute for the actual experience distinctions made for the sake of exact definition. The Stoics, however, were emphatic in their insistence on the importance of assent, for upon it, they believed, depended knowledge, science, and all forms of activity. This emphasis became more pronounced in the controversy with the Academy. For, in the opinion of the Stoics, moral freedom was involved in this question. Moreover, they made a tacit assumption that assent to an impression implied its correctness. Accordingly, if their opponents acknowledged such assent they also admitted the possibility of certain knowledge. Thus these older Stoics had not only admitted volition as a factor in cognition, but had gradually rendered it basal for all knowledge and hence made a definite approach toward a subjective standpoint.

(b) *Analysis of the object of knowledge.*—On the other hand the older Stoa, and Chrysippus in particular against the Skeptics, gave much attention to the characterization of the object of knowledge. For they grounded their doctrine of absolute certainty on the freedom of assent and the objective character of the criterion, using this term in its most usual connotation of that in accordance with which a thing is judged, as a *φαντασία καταληπτική*.² Since the Stoics used *καταλαμβάνειν* in the technical sense, to apprehend, comprehend, a *φαντασία καταληπτική* signified an apprehending, knowing impression, one fitted to give knowledge and apprehending the object of knowledge. That this was the meaning intended seems clear from the explanation given by Sextus.³ "The Stoics consider this particular presentation as one apprehending completely the external objects and as absorbing thoroughly the distinctive marks of these objects."⁴ Some true *φαντασῖαι* are *καταληπτικάί*, others are not. For they may be true, exact impressions, and yet not be means of certain knowledge. To insure certainty, the impression

¹ Plut. *De Vir. Mor.* c. 3; *Plac.* vii. 9; Cic. *Ac.* i. 40.

² Sext. *P.H.* ii. 15-16, 22-78; vii. 35, 261.

³ Sext. vii. 248.

⁴ Cf. *ibid.* 411 and 247.

must in the first place be from an existing object; and in the second correspond to it, so as to exclude visions of madmen and all forms of illusion; finally it must give accurately all the characteristics of the real object.¹ Hence some peculiar sign is essential, a distinctness which brings conviction of its truth. That the *καταληπτικαί φαντασίαι* have such characteristics can be seen from our behavior when we desire to know an object exactly: in trying to see an object, we go nearer, strain our eyes to get a clear impression, and are not satisfied till we attain it.²

This importance assigned to the objective character of a mental impression conduced to a closer examination of the meaning of the term *φαντασία*. Some *φαντασίαι* are perceived by the senses, said Chrysippus and his followers, others are apprehended through the understanding, as in the case of the incorporeal and other rational matters.³ When it is said that ethical and aesthetic qualities are perceived with the senses, the meaning seems to be that such abstract qualities are found in relation to the sensuous and are perceived by means of, but not through, the senses.⁴ The perception of ethical and aesthetic values was referred to the understanding or to sense trained and directed by reason.⁵ In the words of Sextus: "Some presentations have such a nature that reason forms images on their basis, but not directly through their agency."⁶ In regard to content, therefore, *φαντασίαι* are of sense-qualities when given through immediate sensation.⁷ When produced by the understanding, they may be of actual realities, as of ethical and aesthetic qualities or of matters reached by inference;⁸ of things whose reality is possible but not certain of which the stock example was *νόητοι πόροι*; of concepts and the incorporeal.⁹ The stress naturally fell on impressions of sense. Since the two faculties of sense and reason are essentially a unity, no intrinsic change was believed to occur in the transformation of sense-elements into percepts and concepts, as the sensations are worked over into new knowledge in the formation of the *καταληπτικαί φαντασίαι*. Thus Zeno is reported to have said: "A sense-perception is true and trustworthy, not because it includes everything there is in the object,

¹ Sext. vii. 249-51.

² *Ibid.* 257-58, 252; cf. Cic. *Ac.* ii. 77.

³ D. L. vii. 51-52; Sext. vii. 240; viii. 176, 402-9; Epict. i. 1, 5; ii. 23, 7.

⁴ Plut. *St. Rep.* 19; Cic. *N.D.* ii. 145.

⁵ Epict. ii. 23, 7; iii. 8, 1; Cic. *Ac.* ii. 20.

⁶ Sext. viii. 409.

⁸ D. L. vii. 52; Stob. *Ecl.* ii. 86.

⁷ *Ibid.* 176; Galen 329.

⁹ Sext. ii. 99; viii. 145, 306.

but because it does not leave out any of the qualities that are present, and because nature has given, as it were, a rule and standard of itself whence afterward notions of things are imprinted on the mind from which not only first principles but also further means for formulating concepts are discovered.”¹ Of the same nature as the things directly given by sense are also the things inferred from them.² “Just as silver and gold coins are in themselves merely coins, but if they are used for hiring a boat, under those circumstances in addition to being coins they are also passage-money,”³ thus sensations in passing over into thought suffer no more alteration than the coins used as passage-money; they function as contents of another kind of cognitive process. Hence percepts are the first form of thought-material; then memory images are formed because the understanding has the capacity of retaining impressions.⁴ “Mind itself which is the source of sense-perception and also itself is sense-perception has a natural power which it turns and applies to things by which it is moved. Accordingly, some impressions it receives in such a manner as to use them immediately, others it stores up; from the latter memory arises. Thus through memory by means of resemblance, combination, comparison and contrast, the mind arrives at new knowledge.”⁵ In whatever form, then, the object of knowledge was regarded as directly and completely given.

c) *Preconception as a criterion*.—While the immediate and objective character of the *καταληπτική φαντασία* was reinforced by Chrysippus, a decided step toward a subjective attitude was taken in regard to the criterion in its other signification, as the faculty by which a judgment is passed. The older Stoics, we are informed,⁶ held right reason to be the criterion; Chrysippus, in opposition to Boethus, posited *αἰσθησις* and *πρόληψις* as criteria. The preconceptions as concepts formed on the basis of sense-perception in the same way in all men represent the laws of thought, since what is in accord with nature is true. The *ὀρθὸς λόγος* is the power of rational thinking through which preconceptions are developed and formed into clear concepts that can grasp reality and become criteria. As the preconceptions are universal, hence never contradictory and therefore normative, they are the primitive logos⁷ out of which reason is perfected and completed. Here again, then, is

¹ Cic. *Ac.* i. 42.

² *Ibid.* ii. 21; Sext. vii. 345-46.

³ *Plac.* iv. 11; Arnim II, 28.

⁴ D. L. vii. 52-53; Sext. ix. 393.

⁵ Cic. *Ac.* ii. 30.

⁶ D. L. vii. 54.

⁷ Cf. Epict. i. 28, 28; 17, 1; iv. 8, 12.

an evidence of a change produced by the psychological analysis of Chrysippus; for as a result of introspection he put the emphasis on the actual rather than on the ideal criterion.

D. Development of the Subjective Attitude in Regard to Concepts:

Doctrine of the λεκτόν

Concepts,¹ as incorporeal, were first given a subjective tinge by the Stoics of this period. They called them "our thoughts" and regarded them as non-existent and unreal. Some are gained by consciously applied efforts of reason; others, the preconceptions, all men necessarily and without elaborate reasoning build on their experience. Universality was held to be conferred only by reason, and is possessed also by verbal expressions. In his dialectic Chrysippus elaborated a theory of signs and things signified, distinguishing between the thing, the word, and the signification which exists only in the mind of an intelligent being.² The thing and the sound are corporeal; the signification τὸ λεκτόν is incorporeal, and in contrast to the concrete particular thing, general. As universal τὸ λεκτόν must be immaterial. Since the concrete object and its sign are individual, these cannot be signified by the verbal expression referring to them. Such expressions are signs of something we represent to ourselves on hearing the word, namely τὸ λεκτόν.³ Truth and falsehood have reference only to this signification. In obvious contradiction to the most fundamental Stoic tenet, therefore, the universal, as concept and signification, was considered immaterial. Such a position, together with the virtual identification of words and thoughts, is another indication of the tendency toward a subjective point of view.

In the whole treatment of Chrysippus there is noticeable an increasing skill in psychological analysis and consequent emphasis upon conditions and environment in general. The infallibility and sufficiency of the wise man are lofty ideals, but the stress is placed on the reliability of the normal individual and on the need of training and circumspection. As introspective analysis became more accurate, progressive attention was paid to the individual and his needs. Agreement with nature was the basis of Zeno's system, but the question, What nature? he did not raise. For Cleanthes with his emphasis on the unification of macrocosm and microcosm, "according to nature" meant agreement with the universal

¹ ἔννοιαι.

² D. L. vii. 62; Sext. viii. 11; Plac. iv. 20, 2.

³ Cf. Sen. Ep. 117, 7; Sext. viii. 70.

law. But for Chrysippus the main interest centered on human nature, harmony in thought and act. It was the mystery that τὸ ἡγεμονικόν, ideally and potentially self-consistent, could decide and act both in agreement and disagreement with reason that presented the chief problem to him in his treatment of the criterion in relation to free assent. Another effect of this emphasis on the individual was the prominence of the utilitarian principle in his ethics. In Cleanthes we have an interpretation of rational life from the standpoint of the universal, in Chrysippus as viewed from the level of human nature; the one theory is ontological and theological, the other psychological and concerned with the doctrine of virtue and happiness. For the Stoic the two views were complementary, but as Chrysippus gave explicit and distinct expression to the various distinctions implied in the tenets of his predecessors and worked out a more thorough psychological account he also prepared the way for a gradual substitution of logical distinctions for the actual experience and helped to develop a tendency to assign undue importance to one side of the dualism that was becoming more apparent in philosophy.

3. INCREASED SUBJECTIVISM IN THE MIDDLE STOA

A. *Social Conditions*

The first century after the death of Alexander was an era of increasing importance of Greek thought and ideals from the intellectual side; politically, the monarchial principle predominated during the first fifty years; then followed a movement toward liberty on the part of the leagues in European Greece simultaneously with a similar tendency in Asia facilitated by the invasions of the Gauls. In these affairs the struggles and ambitions of single individuals for mastery had become more decisive though there were also undertakings in which Greeks as a united people acted in behalf of freedom. In the leagues there was an attempt made at representative constitutions, but it was always the personality of the leader that prevailed.¹ By the middle of the second century, "politically the Greek element was everywhere on the decline; intellectually, however, almost everywhere in the ascendant."² It is interesting to observe how this political situation affected the chiefs of the older Stoa, who were vitally interested and very influential in the affairs of the Greek states. Starting with the category of universality adopted from the Socratic concept, they sought to give room to personal initiative no less in their ethics than in their theory of knowledge. As the prospects

¹ Holm *Hist. of Greece* IV, 412.

² *Ibid.* 423.

for expansion of political authority, which during Alexander's brief supremacy seemed to give practical confirmation of their theory, became less favorable, the more did the Stoics dwell on the all-pervading law that united all men in a city of Zeus. When they grew more conscious of the ultimate reference of decisions to the individual as such, the stress began to be put on the rational control exerted by each person rather than on the universal logos, and thus the perfect unity exemplified in the wise man became more an ideal than an actuality.

B. Growth of Introspection

a) Increased psychological analysis.—In the Middle Stoa the introspective attitude came to be distinctly recognized and employed. The consequent difficulties with the objective criterion and the still more emphasized assent brought these philosophers to find some solution in a subjective standpoint as is evinced by the changes in the definition of the criterion, the new interpretation of the function of reason, and the importance assigned to attention.

The older Stoic view based on the absolute demarcation of virtue and vice, wisdom and ignorance, attributed the non-existence of their ideal state to the folly of the men who had established governments. The nature of the soul and its relation to deity with the consequent interrelation of all human beings implied that there is only one law and one state of God and men. The critical acumen of Carneades developed by observation and introspection showed forth in a strong light the contrast between the ideal and the actual and led to divergence of opinion within the Stoic school between the conservative and the more progressive.¹ Of these latter, Panaetius was forced to recede from the Stoic ethical ideal and consider ordinary men and their standards; and at the same time to make the law of universal sympathy applicable not only to the wise but to ordinary mortals. The beginnings of such concessions in political and ethical theories, however, had already been evident in Chrysippus and was due to the reciprocal interaction of the Skeptical criticism and social-political conditions on the one hand with the emphasis on psychological analysis and insight on the other.

The influence of Plato and Aristotle as well as other Academic and Peripatetic philosophers on these Stoics is well known, but this readiness to receive help from other schools and acknowledge the truth in their criticisms is another evidence of the development in analytic introspection. Panaetius held that knowledge and morality must be based on the

¹ Cf. Cic. *Ac.* ii. 17.

logos common to all men, and that differences in opinion are due to the specific character of the individual reason. The assertion of Posidonius that all philosophers agree in their fundamental tenets may be ascribed to a similar belief. This insistence on the universality implied in rational thought in opposition to the individualistic point of view of the Skeptics combined with due recognition of individual differences signaled the adoption of a subjective standpoint. This attitude is also manifest in the Platonic conception of soul held by Posidonius. For the difference in point of view is significant: no explanation is required, said the Stoic, introspection is the only verification needed. The transition from social to introspective psychology had been definitely accomplished.

b) *The function of reason.*—Panaetius, adhering to the tenets of his school, made reason the *summum bonum*. Reason is intrinsically the same in all men, but it is present in varying degrees in different individuals. Consequently, there is a double goal: for the wise the absolute perfection of reason, and for all men the perfection of natural capacities according to reason.¹ Though thought and feeling vary for different individuals this variability does not affect the end since that is founded on absolute reason. The ground of certain knowledge Panaetius found in the ability to perceive and think that is common to all; differences of opinion and error are due to the divergence of individual natures which is accentuated by the varied effects of environment. As the senses *per se* do not deceive, the cause of error and illusion must be found in this variability.² Posidonius held that reason alone can recognize the truth of presentations and preconceptions and can pass judgment on them because the soul perceives through the senses and in virtue of its participation in universal reason is capable of understanding its nature. On account of the relation of soul and body, reason is influenced by the nature of the body as is evident from the wide difference in beliefs. As affected by the body reason is not an impartial judge of the true and false; but independent of the body it is intrinsically identical with universal reason. Hence human reason sees the truth more clearly the less it is influenced by the body. Thus the dualism was becoming acute.

c) *The criterion; analysis of attention.*—This view of reason had important bearing on their doctrine of the criterion. Carneades had argued that over against every presentation another equally trustworthy may be placed and consequently the *καταληπτική φαντασία* does not necessarily appear true. Admitting that it may seem false, the Middle

¹ Cic. *De. Of.* i. 107-10.

² Sext. ix. 61-74; Cic. *Tusc.* i. 46.

Stoa¹ made another addition to the definition of the criterion, that nothing must interfere with the perception. The certainty that no objection can be raised against a presentation cannot be afforded by the presentation itself, as there is need of an investigation to prove that there is nothing hindering correct perception. Five conditions must be fulfilled in order to have sense-impressions that give certain knowledge: the sense-organs must be normal, the object must be in such place and such condition that it can be perceived, the observation must conform to the purpose in view, and the understanding must be sound.² Reason must of necessity be the only faculty that can decide whether all circumstances warrant the giving of assent. The Stoics accordingly acknowledged that all obstacles must be removed before the presentation can be regarded as a criterion, but did not ask for proof that there is no contrary condition. Such a position virtually abolished the doctrine of the *καταληπτικὴ φαντασία* as a criterion and also *αἴσθησις* as a faculty of judging. Thus in regard to the criterion in both senses important changes had been made. The older Stoa had in varying degrees tried to reconcile free assent with such distinctness and aggressiveness of impressions as compelled acknowledgment. The Middle Stoa, taught by their own introspection and by Skeptical criticism, conceded the possibility of error on such grounds and fell back on the characteristic of clearness freed from all interfering circumstances, on which reason alone could pronounce. So the problem had in fact shifted from a study of the object of knowledge to the analysis of attention. Here centered the reason for the modifications made in the interpretation of the criterion and also the very essence of the subjective attitude.

4. THE SUBJECTIVE ATTITUDE DOMINANT IN LATER STOICISM

A. Social and Political Conditions of Roman Stoicism

When Stoicism first arose, a civic basis of morality was being abandoned for an individualistic or universal, as the ethical ideal became internal and attributed to man as an individual. The effect of Stoicism was therefore less obvious, especially as no great personalities appeared who based their social and political practices on Stoic principles; for it was developed theoretically as an academic discipline before it became practical. The conditions of Rome in the age when Panaetius acted as an apostle of Stoicism form a striking parallel to those of Greece at the time of Zeno. As its origin was coincident with the world-empire

¹ Cf. Schmekel 356; Sext. vii. 253.

² Sext. vii. 424; Cic. *Ac.* ii. 19, 46.

of Alexander, so Roman Stoicism arose simultaneously with Imperial Rome. Stoic doctrines were introduced among the members of the Scipionic circle when religious and ethical problems resulting from the social and political development were forcibly pressing upon the men who stood at the head of affairs. The conceptual religion of Rome when brought into contact with the personal elements that characterized Greek religious beliefs became full of contradictions, the more serious since it was part of the law of the state. Added to religious and ethical perplexities were political and economic problems. Under such circumstances the more thoughtful minds would be searching for some valid moral standard and many found in Stoicism a system that harmonized moral purity with world-wide power. At this time ethics was chiefly of importance in the sphere of jurisprudence. So it was in the evolution of imperial law and administration that Stoicism first found a task and became a significant factor as its conceptions of social obligation, world-citizenship, and brotherhood of man contained the germs of a great political order. Historically its influence can be traced in the enactment of law, in literature, in the family as well as in the state. Philosophically it became a creed and a system of morals. While in the Middle Stoa the introspective analysis was concerned predominantly with the problem of knowledge, in Roman Stoicism as inaugurated by Cicero and continued by Seneca it was in ethics that the subjective attitude developed. For Cicero the question of what and how we know was of great interest and not subsidiary to the problem how to act; in Seneca the latter is alone worthy of serious consideration.

B. The Subjective Attitude in Ethics

a) *Cicero*.—In the transition from the teleological to the jural view of morality and from an external to an internal standard in which Stoicism played the chief rôle, Cicero is of great importance in the history of ethics. His belief in the importance of the state and the duty of citizenship is clearly set forth;¹ but in his strictly ethical works the individualistic standpoint is prominent.

Cicero maintains that man has a twofold character: that which is common to all men as rational beings and that which is distinctly his own individual personality; he should follow the bent of his nature in agreement with the universal law (a view that can be clearly traced to the Middle Stoa). Such a conception becomes especially significant in the emphasis on the internality of moral consciousness. The essence

¹ *De Rep.*, *Leg.*, and *De Of.* ii.

of Cicero's teaching is the appeal from the disputes of philosophers to the notions implanted in every human being. Nature has endowed man with the fundamental concepts of morality and unless they were obscured by evil habits and false opinions they would of themselves develop into perfection; and however depraved the moral consciousness may become it still exists. The consciousness of God is immediately given with self-consciousness, and belief in immortality depends on these natural principles.¹ Cicero speaks of *dominans ille in nobis deus* and asserts, *Nullum theatrum virtuti conscientia majus est.*² No one has discoursed with greater eloquence than he on the intrinsic value of virtue. The true criterion is an internal one, consequences are morally irrelevant; the will is the only good. Another evidence of the subjective standpoint is the prominence given to the gentler and more sympathetic side of character; although his writings bear the impress of the sterner and more virile traits, Cicero was an influential factor in the progress toward the gentler virtues. Another conception that is conspicuous in Cicero's ethics is that of humanism, a feeling of universal sympathy ingrafted by nature for man simply as a human being. Most prominent is the tendency toward the subjective attitude in the transition from the conception of supreme good to that of supreme law. Cicero's legal mind had a tendency to give a jural aspect to the rational law and he was probably the first to identify explicitly the law of nature with the *jus gentium*. Discussing the universal law he says,³ the divine reason has the authority of commanding in regard to right and wrong, attaching a penalty in case of disobedience. For Cicero, then, the law of nature, from the objective standpoint, is a supreme code; and from the subjective, a natural principle distinctly commanding what to do and not to do. Thus in ethics Cicero allied himself in general to the Middle Stoa, but made further advance toward a subjective standpoint by giving wider scope both in religious beliefs and in ethical doctrines to the personal element and the inner control.

b) *Seneca*.—The more morality, political and individual, became self-conscious and the need of some reasoned theory grew urgent, all the serious minds of Rome gravitated toward Stoicism. For Cicero, philosophy satisfied a purely personal need.⁴ How the outlook had broadened and the problems multiplied during the early part of the Imperial period is illustrated in Seneca's writings. In these we have

¹ Cic. *Leg.* i. 24; *Tusc.* i. 12; *Fato* 25.

² *Tusc.* i. 74; ii. 63.

³ *Leg.* ii. 8-10; cf. *Rep.* iii. 3.

⁴ Cf. *Tusc.* v. 3, 18-31, 47, 84-120; *Fin.* v. 95.

adherence to the older forms of Stoicism combined with a transformation of its spirit. The resulting contradictions in psychology and ethics made Seneca take recourse to a subjective attitude in these difficulties.

(1) Psychological analysis.—Thoroughly Stoic is the experiential character of his philosophy. Ethics is based on psychology and both are grounded on and tested by experience. The practical side of ethics had gradually received more attention, especially on the part of the Middle Stoa, and Seneca followed their lead, though he did not on that account disparage the formal aspect.¹ He attached great importance to psychology, for he held it necessary to discover the psychological principles prior to determining moral relations, since human nature must be investigated to know the limits of the powers and capacities of man.² In the spirit of the old Stoa, he asserted that the soul as a spark of universal reason is of divine origin and holds a place in the human organism similar to that of God in the universe.³ Hence there was no formal break with the material monism of the Stoa in Seneca's disparaging remarks about the body.⁴ It was rather that the opposition between the rational and irrational had been inevitably widened and this important modification of older theories (an advance even on the innovations of Posidonius) had been occasioned by close study of daily human life both through observation and introspection. As the shadows of the reign of terror closed in upon him, as individual consciousness became a more vivid experience to him, and the tendency to corruption observed in men revealed itself more, the body appeared a prison, a burden, a punishment, and death the portal to glorious freedom.⁵ So the break with psychological monism which appears in his letters was due to a complete transformation of his own attitude and a deeper sense of the moral problems. Though he divided the soul into a rational and two non-rational parts,⁶ he expressed his uncertainty whether anything can be determined about the substance of the soul. "There are many things the existence of which we do not question without being able to state their composition accurately."⁷ Consequently the growing dualism in Seneca's metaphysics was caused by an increasing dualism in his psychology. In strict theory he never dissented from the Stoic ontology, but infused a new spirit into it.

¹ Sen. *Ep.* 95.

² *Ibid.* 121, 3; 89, 8.

³ *Dial.* 12, 6, 7; *Ep.* 66, 12; 92, 27; 65, 24.

⁴ *Ep.* 120, 17; 92, 13; 65, 2.

⁶ *Ibid.* 92, 8.

⁵ *Ibid.* 24, 18.

⁷ *Nat. Qu.* vii. 25, 2.

(2) Moral reformation.—There are found in Seneca's writings suggestions of the old philosophic attitude that true happiness is found in a clear vision of the realm of eternal truth. But Seneca was approaching the ideal by another path and his goal was not so much "a passionless eternity of intellectual intuition" as holiness. It was in this spirit that he entered upon his mission as an apostle of a great moral revival and became a spiritual director to many members of the higher society in Rome. His ethical creed aimed at a radical reconstruction of human nature, at the triumph of moralized reason and social sympathy over brute materialism and selfishness. As a physician of souls his aim was to save men by imparting precepts that appealed to conscience. The first step in moral progress he held to be self-knowledge and confession of faults; the next, daily self-examination and steadfast disregard of deceitful allurements.¹ This ideal could be attained only by struggle; the example of the athlete and gladiator was brought forward, though the reward of the Stoic disciple was not crown or palm, but self-knowledge, renunciation, and resignation.²

This intense feeling of man's capacities and his actual degradation and this yearning to save souls arose not so much from the observation of a corrupt society as from thorough self-examination and his own sad experience: he was himself so far from the goal.³ The combination of idealism and pessimism presented by the earlier Stoicism was fatal to moral reform. The flawless perfection of the wise man was found an impossible model and had already been essentially modified. For Seneca the distinction between the wise man and the fool ceased to be an absolute demarcation, though still ideally valid, and degrees in virtue and vice were fully acknowledged in order to encourage those who are traveling the road of moral progress.⁴ Again, the ideal contempt for all external things gave way to the Aristotelian recognition of the comparative value of some. The reforming force is reason dwelling in every human soul.⁵ A man gets a vision of true happiness as centered in virtue, then forms habits of thought in accordance with the rational law; from the settled purpose arises the virtuous act.⁶ Therefore he must trust the strength of reason in a moral struggle. Seneca had, however, had ample experience of human frailty and fickleness. So he also urges dependence on the help of God.⁷ "To those who are climbing

¹ *Ep.* 6, 1, 28; 56, 4, 15.

² *Ibid.* 96, 5; 78, 16.

³ *Ibid.* 72, 8; 57, 3; 89, 2.

⁴ *Ibid.* 72; 75, 8.

⁵ *Ibid.* 66, 12.

⁶ *Ibid.* 95, 57; 116, 7.

⁷ *Ibid.* 73, 15.

upwards, God holds out a hand."¹ Moreover, nothing is hidden from God and his voice, "that witness in the heart" must not be disregarded. Peace and tranquillity are attained by living in obedience to the law of reason, and the mind if unperturbed will follow right conduct infallibly. Everything of worth is within. Mind creates its own world or rediscovers the lost Eden.² The period of innocence, the vanished Golden Age, to which Seneca often looked back with longing, was not truly moral, for there was ignorance of evil, rather than preference of the good. True morality can result only from voluntary choice of the better. Seneca emphasized the Stoic view of assent: "no impulse without assent";³ and defended the foremost Stoic thesis: the necessity of judgment in thought and act at all stages. Thus throughout Seneca's writings there is abundant evidence of the advance in introspective analysis.

(3) Spirituality in religion.—Seneca never in form severed himself from Stoic materialism; but as the moral life became more vital to him, deity appeared a spiritual power. The Stoic conception of God was so comprehensive that as the need developed, it became elastic. To Seneca deity is a moral and spiritual being, "a secret power within us making for righteousness." When he became intensely conscious of the conflict in himself and others, he found succor in a vision of God as Creator,⁴ a pitiful loving Guardian, Giver of all good, a Power that draws to himself, who receives us at death, in whom is our eternal beatitude. A harsh repellent moral idealism had become a religion. From the time of Cleanthes continued, though not endless, existence after death was a Stoic doctrine. If virtue is the sole source of human happiness, length of life is a matter of indifference, as Seneca clearly recognized.⁵ Yet the demand for immortality was felt; and it was not merely a logical consequence of Stoic physics, it was corroborated by the general belief in it. But it had a deeper foundation in his own spiritual craving. In his highest flights of imagination, personal immortality seemed a fact, a definite future life of bliss.

(4) Political conflicts.—The two competing tendencies in Seneca's exposition of Stoicism are also illustrated in the conflict between his admiration for the sheerly isolated perfection of the philosophic monk and his active sympathy with the movement of humanity and man as a member of the universal commonwealth which was aroused by his

¹ *Ibid.* 83, 1; 43, 5.

² *Ibid.* 74, 6-14; 31, 10; 96; 98.

³ *De Ira* ii. 3, 4.

⁴ *Ep.* 73, 15; 79, 12; 102, 22.

⁵ *Ibid.* 93, 74.

relation to the imperial government. There are two states in which a man may be enrolled—in the city of gods and men and in the particular city to which he is assigned by the accident of birth.¹ There is a practical difficulty for the wise man: what earthly commonwealth can he serve consistently?

It is evident, then, that for Seneca epistemology does not present problems. It is the moral struggle evident both in his own life and in the need of the many stretching out their hands for aid that appeals to him. The contest, he feels, must be fought out in each individual. So there result a dualism and a subjective attitude in all phases of experience in which he felt most keenly the antagonism between the is and the ought—psychologically, a dualism between the rational and irrational; ethically, the struggle between the ideally perfect in man and society and the actual depravity; politically, between the isolated self-sufficiency of the rational being and the dependence upon and the sympathy with all members of the community, between the ideal state and the Roman Empire during the Julio-Claudian tragedy.

C. Ethical and Religious Environment of Later Stoicism

Cicero's letters present a vivid picture of the discontent with actual conditions and the uncertainty of the future which characterized his age. But this was only the introduction to the perplexities of the Early Empire, when statesmen "moved at random in the midst of uncertainties,"² when servility and independence were equally perilous. Alongside of the decline and degradation of the senatorial order, of which we catch shadowy glimpses in Seneca and get a minute picture in Tacitus, other great social changes were taking place;³ the invasion of Greek and Oriental influences, the emancipation of woman from the old Roman conventionality, the growing power of a new moneyed class, the rise of freedmen who thus created a free industrial order and helped to break down "the cramped social ideal of the slave owner and the soldier." In Juvenal's satires we behold both the old Roman prejudice and conventionality that was passing away and the growing sense of equality and sympathy. In these social and political changes Stoicism played an important part. In general the Stoic opposition in political affairs was only the opposition of a moral ideal, still with others it was the "deliberate propaganda of a political creed."⁴ Socially its doctrine of brotherhood awoke a deeper sympathy for the miserable and helpless,

¹ *De Otio* iv; *Ep.* 68, 2.

³ *Ibid.* 69, 105.

² Dill *R. Soc.* 41-42.

⁴ *Ibid.* 48.

and aided the recognition of equality of the sexes and the various classes in regard to moral and mental capacity. For the Roman, moral authority both political and personal was embodied in the government. Hence those who understood the uncertainty of the foundations of these institutions, who were most keenly alive to the social, political, and religious changes, felt also most acutely the need of a stable basis and a law unaffected by the varying fortunes of the state. In return for the loss of civic freedom and patriotic energy the great mass of the people had been given peace, order, and material well-being; but the indications are that the moral tone was not elevated, chiefly for the reason that stimulus to action was lacking. Ideals to correspond with the altered conditions were wanting also. Now philosophy abandoned the quest for an ideal of knowledge and took up the problem of conduct and happiness. Religion and morality were both part of the law of the Roman state and therefore had but indirect connection with each other. When the cultured Romans first sought in philosophy explanations for their perplexities, they found a solution in a threefold theology of the poets, statesmen, and philosophers; the latter alone could be true, but the popular religion was necessary for the common people. When the true law was identified with right reason and accordingly with the individual, it was still rather the law of the state than personal morality that emanated from universal reason. Hence it was the problem of civic and personal morality, external and inner control, as well as the relation between state religion or deity as rational law, on the one hand, and individual consciousness on the other, that occupied Stoic philosophy during the Imperial period. In this development of self-consciousness, the individual standpoint was emphasized by Epictetus, the universal by M. Aurelius.

D. Increased Emphasis on Self-Consciousness

a) *From the individual standpoint: Epictetus.*—(1) Reflective consciousness.—Reflective consciousness (*παρακολούθησις*) according to Epictetus is the distinguishing peculiarity of man. The human soul is a unity and rational; hence mental functions apparently similar in man and the lower animals are really different. A man that lives irrationally, though in form human, is in essence a brute.¹ By reflective consciousness man is able to understand and discriminate between impressions. Man is not only a spectator; he is also an interpreter. The irrational animals are not conscious of understanding what is happen-

¹ ii. 4, 11; 22, 27; iv. 5, 19.

ing.¹ Use is one thing; conscious appreciation another. Man is a citizen of the world and one of the ruling, not of the subservient parts, for he is capable of comprehending the divine administration and inferring the connections of things in a logical manner.

The psychological dualism characteristic of the Middle Stoa which Seneca followed in his later thought was not adopted by Epictetus; he adhered consistently to the monistic form. The *ἡγεμονικόν* is the center of mental life, but in harmony with the practical tendency of his philosophy, is not so much identified with apprehending and knowing as with feeling and willing; though *διάνοια* is used as a synonym, of much more frequent occurrence is *προαίρεσις*, the whole mental nature from the aspect of will.²

(2) Self-consciousness—the daemon.—The emphasis which Epictetus put on reflective consciousness finds its climax in the self-consciousness involved in his doctrine of the daemon,³ the divine element in man, reason as the better self, conscience. In general the term seems to signify the perfect reason in harmony with the divine, the ideal rather than the empirical personality.⁴ The fact that it is the same self that has these two aspects gives the word also the meaning of the character that is to be idealized, that may be degraded or elevated.⁵ Thus the daemon becomes something variable which in spite of its divine nature develops into what each person makes of it. Thus it expresses a mysterious interaction of human independence and divine aid. For Posidonius the daemon had been the objective,⁶ unchangeable, divine nature in man; for these later Stoics the daemon was subject to modification for better and worse as an explanation of the reality of sin. In Epictetus, the feeling of the high destiny and worth of man is intense, the close connection with God is vital. The inner consciousness of the divine is the clearest and most certain fact of experience.⁷ The likeness to God is moral rather than intellectual; in respect to will the resemblance is perfect.

(3) Theory of knowledge.—Reflective- and self-consciousness is fundamental in the theory of knowledge taught by Epictetus. By the term *φαντασία* he, in the first place, implies the presentation of external objects communicated by the senses. Man in distinction from the lower animals has the ability to distinguish presentations and thus to deter-

¹ i. 6, 13-21; ii. 8, 6-8.

² iv. 1, 147; ii. 15, 2-20.

³ iii. 22, 53; i. 14, 12.

⁴ ii. 8, 21; iv. 12, 2; 9, 13.

⁵ ii. 8, 13-21.

⁶ Galen 469.

⁷ i. 12, 26; 5; 17, 27; ii. 8, 12.

mine himself freely and rationally.¹ But this ability to make use of presentations must be trained and cultivated. In this way *φαντασία* passes over into its second signification, the meaning or value of presentations. In its primary sense, *φαντασία* is often substituted for *πρᾶγμα*, *ὑποκείμενον*; it is not identical with the external object *per se*, but it is the external object as perceived. As merely presented, things express nothing as to their value, but put questions to the mind.² "It is the constitution of our understanding that when we meet with sense-objects, we do not simply receive impressions from them; but we also select something from them, and subtract and add something, and compound by means of them these things or those, and in fact pass from some to other things which in a manner resemble them."³ Because things put questions, Epictetus urges⁴ that presentations must not be accepted without examination, and training in such evaluation is indispensable.⁵ There is a force, power, aggressiveness in things that assails, seizes, confuses, charms the mind.⁶ Hence the importance and dominance of assent in the lectures of Epictetus. Again and again he emphatically insists: We cannot be compelled to assent; therefore, there is something in us naturally free. A man cannot be forced to acknowledge what is false or to desire what he does not choose, or, in short, be constrained to make use of presentations.⁷

The *φαντασίαι* are, then, in the terminology of Epictetus, presentations of sense, percepts; in the second place, mental percepts, images, having as contents aesthetical and ethical qualities, real things not apprehended by sense, or abstractions.⁸ It is with reference to *φαντασία* in the latter signification that training is peculiarly necessary.⁹ The mental state is a compound of which the external object is the least important ingredient. It is the value that is put upon external objects to which they are devoted, the spirit in which they are used, that counts. No external thing can affect the mind until it has become a part of the mental life and has been stamped with the approval of the will. External things do not constitute rational life; for the mind makes the significant contribution in determining the worth of each object and event. Out of the indifferent external matter thinking makes the world as it is. If the mind is trained to see that only the things within the power of the

¹ i. 6, 13; ii. 8, 4; 14, 15; iv. 7, 32.

² iii. 8, 1.

³ i. 6, 10.

⁴ iii. 12.

⁵ iii. 8.

⁶ ii. 22, 25; iii. 25, 6, etc.

⁷ iii. 22, 25; iv. 1.

⁸ i. 27, 1.

⁹ iii. 8, 1; ii. 18, 23-27.

will are good or evil, then progress will be made, for assent will never be given to anything but a *φαντασία καταληπτική*, which accurately estimates all that befalls us at its true worth.¹ Philosophers utter words contrary to accepted opinion but not contrary to reason, for it will be found by experience that their words are true.² Hence the philosophy of Epictetus, though it insists on the subjective aspect of value, is grounded on experience that may be tested by all.

(4) Autonomy of will.—From the preceding position it logically follows that the good of man is the will, and that progress consists in the exercise and improvement of the will. Only will compels will, for it is in our power and all action depends on it. Nothing else can conquer will than will itself, for it is a law of nature and of God that the superior shall always overcome the inferior.³ It is not the faculty of vision that opens and closes the eyes and turns them away from objects which it ought not to use, but the faculty of will. It uses the senses as tools and tests and judges the faculty of sense.⁴ Man is not flesh or blood or sinews, but that which uses these bodily parts and that which, conscious of itself and of them, controls impressions.⁵ Correct judgment is, accordingly, a matter of will.⁶

As the good of man is a certain kind of will and the proper use of impressions depends on the will,⁷ it is indifferent whether things are composed of atoms or of similar parts or of earth and fire; it suffices to know the nature of good and evil. Man ought to live according to nature and therefore it is his duty to contemplate the order of things; but the purpose of the observation is that he may live life as it ought to be lived.⁸ As treated by Epictetus, therefore, philosophy became ethics that reached its crowning-point in theology. For his own reflective experience gave rise to a strong persuasion that it is the privilege of a rational being to live in conscious union with the divine, and from his own experience of such a relationship man ought to be conscious of God's presence and greatness. From this same consciousness arose the profound realization of the brotherhood of man.⁹ The common opinion that only free persons ought to be educated is wrong; "rather believe the philosophers who say that only the educated are free."¹⁰

It was this need of moral training that lay at the basis of the teachings

¹ iii. 8, 4; *Ench.* 45.

² iv. 1.

³ i. 25, 4; 17, 22; 29, 28.

⁴ ii. 23.

⁵ iv. 7, 8-12.

⁶ i. 8, 16.

⁷ i. 20, 15; 29, 1; iv. 5, 32; ii. 1, 4.

⁸ Cf. *Ench.* 49.

⁹ i. 19; ii. 4, 5; ii. 1.

¹⁰ ii. 1, 22.

of Epictetus. Like Seneca and Musonius he considered himself a physician engaged in the cure of souls. "The philosophers' school, ye men, is a surgery; you ought not to go out of it with pleasure, but with pain; for you are not in sound health when you enter." Here in this self-consciousness we find the origin of the subjective standpoint as illustrated in Epictetus: the reference of the problem of control to the individual will as has been noted in the theory of knowledge, especially with respect to evaluation of the elements of cognition, the autonomy of will in psychology and ethics, the personal union with God, in which communion was found the ground of the course of the world as well as of the interrelation of men.

b) *From the universal point of view: M. Aurelius.*—(1) Cosmic interrelationship.—With still greater emphasis on self-consciousness, M. Aurelius, in comparison with Epictetus, made a more complete application of the conception of the cosmos. No one has more thoroughly identified himself with the doctrine that the universe is a living organism with rational interconnections.¹ All things by law is the whole sum. A vivid realization of the universe as a system of dynamically inter-related parts is expressed in his words: "Subsequents follow antecedents by a bond of inner consequence; it is no mere numerical sequence of arbitrary and isolated units, but a rational interconnection. And just as things existent exhibit harmonious co-ordination, so two things coming into being display not bare succession but a marvelous interrelationship."² The universal law is from one point of view Deity itself. "In the god's work there is providence everywhere. For the action of chance is the course of nature or the web and woof of the dispositions of providence. From providence all things flow."³ "No human act can be right without co-reference to the divine and conversely." The mind of the universe is social. One and all work toward one consummation, some knowingly and intelligently, others unconsciously.⁴

(2) Social relationship.—Man's brotherhood with all mankind is not by blood or physical descent but by community in mind; and each man's mind is God, an efflux of deity.⁵ In social relations it is toward men's inner self that all consideration must be directed. It is this inner self that is the object of all analysis in the *Meditations*. In this self the immanence of the indwelling God comes to light. Though Deity on the one hand is more impersonal, it is on the other more imperi-

¹ iv. 40, 45; vi. 3, 38; v. 8; vii. 9; ix. 9.

² iv. 45.

³ ii. 3-13.

⁴ i. 30; vi. 42; xi. 18; v. 1.

⁵ xii. 26.

ous and distinct in operation. The god within has control of what man is.¹ Loyalty to his own indwelling reason and god is the supreme obligation² and the aim should be to keep the spirit within pure.³ Thus pantheism became less physical; the language used is almost theistic. Life is the presence of God and the course of the world is the evolution of providence which is operative everywhere, especially in man's self. This intense conviction of a god within makes cosmic duty become personal.⁴ Therefore "earthly life has but one fruit: inward holiness and social acts."⁵

(3) Autonomy of the spiritual element in the soul.—In his view of the soul, M. Aurelius makes the spiritual more prominent by using *ἡγεμονικόν*, *νοερόν μέρος*, and *νοῦς* (as distinguished from *ψυχή*) for the inner self, the heart, the rational content of the soul.⁶ It is interesting to notice that he follows the doctrines of the schools of medicine according to which *πνεῦμα* meant the life-principle or nerve-fluid⁷ used to explain physiological processes. So he made a triple division of *σῶμα*, *ψυχή*, and *νοῦς* to which he attributed respectively *αἰσθησις*, *ὅρμαι*, *δόγματα*. M. Aurelius used *φαντασία* to mean impressions of sense and adhered to Zeno's theory of *τύπωσις*.⁸ Predominantly *φαντασία* signifies a thought product with a sense of valuation and appreciation.⁹ The tests to be applied to such an impression are "objective character, subjective affection, and logical relation."¹⁰ This valuation made by a self-conscious subject is also characteristic of *ὑπόληψις*. "The view taken is everything." "The world is a process of variation, life is a view, an opinion."¹¹ Significant is the frequent occurrence of *δόγμα*, conviction or principle, the general conception of the value of things as distinguished from *φαντασία*, the evaluation of concrete objects.¹² The importance of certitude is emphasized; although assent is fallible, it is in man's power to prevent the intrusion of the uncertified, since it is the nature of reason to assent to nothing false or obscure.¹³ Impressions play on the organs of sense but that is the limit of their influence. Though they try incessantly to force an entrance to the inner citadel, to take reason by storm, reason retains absolute power of self-determination and the impressions

¹ iii. 5.² ii. 13; iii. 7.³ iii. 7.⁴ viii. 51.⁵ vi. 30.⁶ xi. 20; iv. 4; ii. 2; ii. 16; xii. 3.¹³ iv. 22; v. 10; vi. 30; vii. 54; viii. 7; ix. 6.⁷ iv. 3.⁸ ii. 7; iii. 6-16; vi. 16; vii. 29.⁹ iii. 6; viii. 26; vii. 47; viii. 36-17.¹⁰ viii. 13.¹¹ xii. 18, 22, 26; iv.¹² vii. 2.

must await its decision.¹ No matter what affects the human being from without, as long as it is not *viewed* as an injury, he remains uninjured. Hence the requirement laid by M. Aurelius on himself: "Efface impression, stay impulse, quench inclination, be master of yourself."²

The *φύσις λογική* pursues the even tenor of its way, when in impressions it yields assent to nothing false or insecure, when it directs impulses to social acts only, when it confines inclination and avoidance to things within our power, and welcomes every apportionment of universal nature. Over against this active dominant self stand the external objects,³ which are contrasted with moral natures, have no sense or mutual relations, must be analyzed into cause and matter,⁴ and are worthless and transitory. "Facts, things, events, stand outside us, just as they are, knowing nothing and stating nothing about themselves. What states the case for them? τὸ ἡγεμονικόν."⁵ The understanding modifies and converts every hindrance to act into furtherance of its principal aim.⁶ The soul is self-swayed and self-moved and modifies the objects upon which it exerts influence into accord with the judgments that it approves.⁷ The inner self has only self-enacted needs, is self-complete.⁸ "Be we ever so much made for one another, our inner selves have each its own sovereign rights."⁹ "Press straight to the inner self—your own, the world's and this man's."¹⁰ In dealing with others we must look at their inner selves; the touch-stone, however, is the individual self. "Do not look at other men's selves; but be guided by the nature of the whole and your own nature."¹¹ The soul becomes a self-rounded sphere when it "shines with the light by which it sees the truth of all things and the truth within itself."¹²

(4) Self-consciousness in religion.—Religion is the atmosphere of the Meditations. Man and God are spiritual confederates. Character, called man's destiny by Heraclitus, has become the indwelling genius of the Romans. A conscience responsible for act and word to the self and to deity is the vital reality—his ruler, guide, pilot, lawgiver, monarch, and lord. Truly devout, M. Aurelius thus bases public and personal religion on the tenet of cosmic order. All obligation is cosmic in its sanction. The law of reason is coincident with the law of justice and

¹ iii. 6; v. 36; vi. 52; vii. 16; v. 19; vi. 8.

² ix. 7.

³ ix. 3; xii. 30.

⁴ v. 10; vi. 4; x. 18; vii. 29.

⁵ ix. 15.

⁶ viii. 35.

⁷ xi. 11.

⁸ vii. 16.

⁹ viii. 56.

¹⁰ ix. 22.

¹¹ vii. 55.

¹² xi. 12.

injustice is a sin against God.¹ Deity is cosmic. Therefore, in so far as man identifies himself with the cosmos, no effort is wasted.² Man is an insignificant part—a grain upon the earth; and this quantitative insignificance has its counterpart in the qualitative: everything can be analyzed into cause and substance and nothing else.³ This submission and effacement is a striking contrast to the proud self-sufficiency sounded by the founders of Stoicism, on the intellectual side a counterpart to the emotional fervor of the hymn of Cleanthes.

Civil obligation was thus superseded by the cosmic; citizenship became world-citizenship in the Dear City of God.⁴ This conception came to include the whole range of social duties and endeavor, and because of the position of the emperor was invested with new conviction and reality. In the hands of the great jurists the *lex naturae* was being formulated as *jus naturale*, which Stoic influences helped to secure as the moral basis of the imperial code of laws. Cosmopolitanism thus became self-consciousness of Rome's mission. Too exclusive emphasis on reason and the intolerance that results from purely individualistic morality were ameliorated by recognition of the social bond. Although Stoicism from the first had insisted on inwardness of morality and hence on disposition and motive, at the beginning mere self-consistency satisfied the demand of conformity to nature. Such self-centered egoism proved a failure in the relation of the individual to society. Hence gradually, while the emphasis on the motive and on self-consciousness was increased, the social outlook was broadened so that the individual was in peril of being absorbed in the cosmic world. It was in the stress of this conflict that the subjective point of view developed. For this conception of a cosmic order, of a cosmic standard, cosmic interrelationship and cosmic duty were based on self-consciousness. It was "within the little field of self" that M. Aurelius found the ground of all reality. "Either an ordered universe or else a welter of confusion. Assuredly, then, a world-order. Or think you that order subsisting within yourself is compatible with this order in the all? And that, too, when all things, however distributed and diffused, are affected sympathetically?"⁵

From its inception and throughout its history Stoicism insisted on this interrelation of the human and the divine, the individual and the whole. All speculation must start from things human and advance continuously to the divine, all-comprehending principle of existence. The

¹ xi. 1.

² iv. 23; iii. 12.

³ iv. 4; viii. 18; ix. 37.

⁴ iv. 23.

⁵ iv. 3.

theoretical cannot be severed from the practical, was a Stoic maxim. The material monism of Zeno had included everything—inorganic and organic, thought, feeling, will, man and God—under the category of matter; hence metaphysical materialism. For conduct an equally comprehensive rule was laid down. When philosophy was looking for a canon of right living, a formula to serve as a standard, “*nature*,” which had been the subject of investigations for centuries, met with universal favor. To the Cynic, individual experience and will had unconditional authority; sense and instinct were the sure utterance of nature, and happiness was to be found only by obeying its primary mandates; all social obligations and sanctions, as extraneous to man’s nature, were a matter of indifference to the philosopher. Zeno adopted the formula: Life in agreement, or self-consistency and conformity. Hitherto the emphasis on nature had been on the physical and sentient side of nature; the inclusion of reason and the consequent social relationship changed the conception of the wise man and things indifferent. In the gradual clarification of the implications in pantheistic immanence and social fellowship, return to nature involved separation from the brutes and inert matter, and a recall from individual isolation to conscious brotherhood with human kind and harmony of will with God. As long as sense and impulse pronounced the verdict there could be only absolute rejection or acceptance. When reason became dominant, directing sense and impulse, a graduated scale of things indifferent as they aided or retarded life in agreement with reason resulted. The consequent suppression, or rather attempted annihilation, of the emotions made the nature from which reason had been excluded subservient. From the sovereignty of reason, personality as the ultimate unity of individual will and consciousness, distinct from the physical organism and environment was gradually revealed—with the final antithesis not between thought and sense, but between spirit and flesh, in later Stoicism. It is this conflict between a metaphysical materialism and an idealistic ethics that makes the problem, aroused by social and political conditions, so acute for Seneca, Epictetus, and M. Aurelius. Here originate the antitheses between the personal and impersonal deity and between the material and spiritual; here is also the ground of the problem of immortality which disturbed Seneca and made even M. Aurelius vacillate. Holding on to the fundamental tenet of the rationality of the universe as their introspection revealed the reality of inner consciousness, of the personal and spiritual, the later Stoics still maintained the identity of the nature of man with that of the universe at large. But this universal

nature had been reinterpreted by ascribing to it the ideal characteristics that the moral struggle presupposed. So also in the theory of knowledge a transformation had taken place. "For as in the balance the scale must needs fall down if weights are placed in it, so the mind must yield to things perspicuous; for just as no animal can resist seeking for what appears suited to its nature, so it is not possible to refuse assent to an object that is perspicuous," Zeno had said. "Will only can conquer will. Thinking makes our world what it is; if it is not a good world, the fault lies in our erroneous cognition," said Epictetus. The view we take, the estimate we put on things, is everything, declared M. Aurelius. Thus the autonomy which had been formerly ascribed to nature or the state has been transferred to will and thought.

III. EFFECT OF THE DEVELOPMENT OF THE SUBJECTIVE ATTITUDE ON SCIENTIFIC METHOD

As regards scientific method a decided change in standpoint can also be traced in post-Aristotelian thought. With the more analytic point of view, the investigation of the principles underlying verification grew imperative. Epicurus began with the doctrine of the real character of the object of knowledge as given in sense-perception, while inferential reasoning was limited to a very restricted field, though its voluntary nature was emphasized. Later Epicureans found it necessary to widen the sphere of inference and in opposition to the Stoics admitted probability instead of absolute certainty. Thus the individual's method of reaching truth was the subject of study. Then the Skeptic and Empiric, closely allied in scientific procedure, worked against the purely deductive analysis favored by the Dogmatists, the one basing all art and science on the practices of daily routine, the other building up his system of medicine on an inductive basis. At the same time the character of the object of knowledge was modified; not reality isolated and independent, but as it appears to the knower, became the problem. Hence progressive value had been assigned to the individual judgment, until finally sole dependence was placed upon it and the solution of problems was sought from a subjective point of view.

I. INTROSPECTIVE PSYCHOLOGY AND INDUCTIVE METHOD: EPICURUS

A. Thought and Sense-Perception as Psychological Processes

Though Epicureanism was distinctly and predominantly an ethical system, it was based on physics and therefore implicated a theory of knowledge and of scientific method. Though Epicurus valiantly defended the reality and accuracy of the object of sense-perception to which he attributed all forms of direct cognition, the psychological analysis which he helped to introduce forced the more progressive and acute of his followers to supplement the omissions and to remove some of the contradictions of their master by adopting a subjective standpoint for which he had himself paved the way. His division of the soul into parts each with a specific function and the physiological and psychological distinction between the rational and irrational elements are typical of the new analytic spirit. Benefiting by the psychological analysis of Plato and Aristotle he deviated from the doctrines of Democritus

that there is no difference between sensation and physical interaction, nor any fundamental distinction between sensation and thought as psychical processes. He held that sensation is produced by the joint acting and common movement of body and soul.¹ He also made further modifications in line with Aristotle's psychology. When Epicurus wrote the canon, he included under αἰσθησις all percepts and imagery. In his mature thought he maintained that the sense-organs are excited by the emanations from objects, but that awareness of such affection is due to the understanding.² Furthermore, he drew a distinction between percepts and images. Having discriminated seeing and the consciousness of the perception, he said: "If we receive a φαντασία by an impression, whether through the sense-organs or through the understanding, of the form or qualities of an object, the form of the object is the same, having been caused by the continuous emanations of films from the object or by some that have been retained."³ In the following sentence ἡ φανταστικὴ ἐπιβολή is used instead of φαντασία, and then φαντασίαι are described as formed by impressions of the understanding or of the other criteria.⁴ It is therefore evident that in the final formulation of his theory Epicurus understood by φαντασίαι presentations either to sense or thought, caused by εἰδωλα, and considered them in general as αἱ τῆς διανοίας φαντασίαι. The question arises here how far such a definition of φαντασία had become common property by the time of Chrysippus, and to what extent Stoics and Epicureans mutually influenced each other or were affected by Aristotle's treatment.

This admission of the understanding to participation in the process of sense-perception had important bearing on the Epicurean system and its significance becomes more apparent when the nature of thought as defined by Epicurus is considered. As the atomistic system offered an escape from fear of the gods and of death, thus giving an opportunity for reaching the goal of philosophy, a life of undisturbed calm, so the attainment of such an attitude was rendered possible by free-will.⁵ Hence to make his theory consistent, Epicurus assumed innate spontaneity in the atoms. But it was through subjective analysis that he got his clue to the swerving of the atoms that made a cosmos possible. This principle of inward mental freedom was proved by man's consciousness of effort in deliberation and of self-activity in volition.⁶ The proof

¹ D. L. x. 63, 4.

² Cf. Arist. (*Century Dictionary*, s.v. "Sense").

³ D. L. x. 49; Us. 317; cf. D. L. x. 48; Cic. *Fin.* i. 21.

⁴ D. L. x. 51.

⁵ *Vol. Herc.* viii. 2, 33.

⁶ Lucr. iv. 251-93.

was found in such facts of experience as the effort felt and discerned in the movements of living things, the straining of the eye to see minute particles, the exertion of the mind to examine the subtle images of the understanding and select those which it prefers. The same principle was applied in his theory of knowledge. Images of all sorts surround and enter the organism in a ceaseless procession, while thought is a voluntary activity that uses the material which is presented in this inevitable fashion.¹ Without presentations, sensuous or mental, thinking would be impossible; yet whenever any concept is made the object of thought, the corresponding image is presented because the attention is directed to that particular εἰδωλον of all the countless images that surround the individual.² Over against the sensuous material, thinking is a "motion in us that joins itself to the presentations of sense and of the understanding, grasping, discriminating, and judging them."³ It is therefore functionally different from sense-perception. Such also seems to be the meaning of Epicurus' statement:⁴ "It must be understood that human nature⁵ is taught and constrained by things and events themselves in various ways; but thought afterwards investigates exactly and makes additional discoveries in what is intrusted to it." In this manner the free activity of reasoning on the part of the individual was admitted and an approach to the recognition of a subjective attitude was made, as not only objects of cognition, but the mental processes as such were studied.

On the other hand the sheer receptivity of sense-perception was emphatically asserted. Sense-perception, Epicurus maintained, is non-rational, and hence can be neither shaken or confirmed by reason. It does not add or subtract anything.⁶ It cannot be invalidated either by perceptions of the same kind or by those of other sense-organs, or by reason, since all thought is based on perception.⁷ "Sense-perception, apprehending what falls in its way, neither removes, nor adds, nor changes anything and altogether in every way gives truth and grasps reality as it truly is."⁸ Epicurus even made the bold challenge: "If one sense-perception deceives, none is to be believed."⁹

¹ Lucr. iv. 777-871, 480; D. L. x. 32.

² Lucr. iv. 799; Cic. *ad Fam.* xv. 16.

³ D. L. x. 31-32, 38-39, 50, 147.

⁴ *Ibid.* x. 75.

⁵ Including αἰσθησις.

⁶ Us. 247; Lucr. iv. 486.

⁸ *Ibid.* x. 42, 53; Sext. vii. 203-4; viii. 9.

⁷ D. L. x. 31, 39.

⁹ Cic. *Ac.* ii. 79, 83.

On the basis of his fundamental tenet that all percepts are true and real, Epicurus dissented from Democritus' view of secondary qualities and agreed with Aristotle and Theophrastus that all sense-qualities are objectively real.¹ Absolute certainty was ascribed to all sense-perceptions inasmuch as they give us the perceived object as it really is, and not merely as it appears. All sensibles are true and real; for there is no difference, according to Epicurus, between saying a thing is true and that it exists.² Only matter and void are substances, he held; all else that can be perceived or conceived he classified as variable qualities or permanent attributes.³ The films that continually pass off from objects are exactly like them in form and all qualities, and the εἶδωλα are apprehended just as they are in respect to form, size, and properties.⁴ Epicurus, then, denied the subjectivity of sensible qualities, and in harmony with his experience-doctrine acknowledged not only the reality but also the relativity of percepts. The films that surround the human organism contain innumerable atoms of which each sense-organ apprehends those alone that are peculiar and adapted to itself. Moreover, no individual grasps the whole object, but only the components that conform to the constitution of his sense-organs. A continuous transmission of similar emanations from objects into pre-adapted pores produces impressions of single objects, was the opinion of Epicurus;⁵ while mental imagery is caused by still finer emanations which would therefore be so subtle as to enter the organism unnoticed by the sense-organs. Thus percepts and images stand on the same level as material of thought. What is perceived is actually present, whether it be the object to which the judgment refers the impression, or the films emanating from it. On this presupposition of the external existence of the perceived object, Epicurus explained the reality and relativity of sensibles. All perceptions are true for their object. Contradictory assertions about the so-called same thing refer not actually but only nominally to the same thing. All persons must pass the same judgments when they have similar impressions under like physical conditions; when two individuals appear to judge differently about the same thing, they are in fact judging different things.

¹ Us. 247, 250, 288; Lucr. iv. 478; Sext. vii. 210, 369.

² D. L. x. 42, 53.

³ *Ibid.* x. 39-41; Us. 6: συμπτώματα, συμβεβηκότα.

⁴ D. L. 54, 49-51; Lucr. ii. 730, 749, 786; Us. fr. 29, pp. 11-13.

⁵ D. L. x. 46-50; Sext. vii. 209; Lucr. iv. 87, 104, 252, 714.

B. Judgment and Inferential Reasoning

On the basis of the psychological propositions that all percepts and forms of imagery are *εἰδωλα* of which the understanding is conscious, and that sense-perception is a receptive process while thinking is a voluntary activity, the cause of error can be found only in thought as it works on the sensuous material and adds something of its own accord.¹ Even in optical illusions the senses do not mislead, but the mind draws false inferences. "Nothing is harder," says Lucretius, "than to draw the line between manifest facts and the uncertainties which the mind all of itself straightway adds on."² "Error and false judgment always consist in forming beforehand some opinion about the future or the unknown. . . . There would be no false judgments unless we felt some other activity originating in ourselves, that joins itself to the various impressions and is capable of making distinctions. If the discriminations thus made are not proved or are disproved, the judgment is false; if proved or not disproved, it is true."³ Judgments are grounded on immediate sensation, and may therefore be either true or false whenever they pass beyond or reject the immediate experience.⁴ If a supposition formed before the actual experience is maintained through direct perception, the judgment was correct. Even judgments about what cannot be directly experienced receive their warrant indirectly from sensation, and a statement about the unobservable which is consistent with immediate experience is true. Consequently, sense-perception is the final and only ground of validity of judgments, in regard both to things not at present observed and those which never come under direct observation. The principle of verification must be applied to future events; the method of non-refutation, in explaining theories about the unobservable.

Sense-perception was the beginning and the unknown was the goal of the cognitive theory laid down in the Canon. This work dealing with "matters manifest and matters obscure"⁵ formed a part of physics and was probably originally intended to show how the principles upon which Democritus based the atomic doctrine were derived from what is self-evident. As according to Epicurus all percepts are true because they depend on the properties of the atoms and their complexes and on the sense-organs,⁶ all differences in sense-perceptions are due to

¹ D. L. x. 50, 147.² Lucr. ii. 464-68.³ D. L. x. 51.⁴ *Ibid.* x. 50.⁵ Sext. vii. 22.⁶ Cf. Lucr. iv. 498.

necessary and uniform causes. Physics, accordingly, was necessary for the understanding of the nature of things in order to vindicate the validity of perceptions, as well as ultimately to establish moral principles.¹ From similar passages in Lucretius it is clear that Epicurus recognized that it was impossible for him to prove that all perceptions follow from definite conditions. It was therefore necessary to insist on the trustworthiness of the senses and to base the validity of sense-experience upon the evidence of things perceived.² The causal law *ex nihilo nihil* is basal, not only for his physics, but for his theory of knowledge.

Truth and falsehood were attributed to belief, and "it was the part of a wise man to distinguish belief from self-evidence,"³ in other words to distinguish the data of sense from the contributions of thought. Appeal must be made to self-evidence in judging percepts; things that await future experience to be proved or disproved must in turn be tested by the same criterion. The unobservable must be so related to what is observed that if the former be refuted so also the latter. But how is inference to the future and the unknown to be made from immediate experience? The reply of Epicurus was that such judgments are made through inferential reasoning which was sharply demarcated from immediate apprehension by the senses. To sense-perception he referred all the most general and basal notions. For he held that such facts as fire is warm, snow is white, honey is sweet, pain is shunned, need not be supported by elaborate arguments; "for there is a difference between proof and formal arguments on the one hand, and a slight hint or direction of attention on the other: the one process reveals to us mysteries and things veiled, so to speak; the other enables us to pronounce upon patent and evident facts."⁴ All general notions depend on the preconceptions which form the basis of inference from what is observed to what is unknown. Such inference is a process of reasoning by means of concepts which "are formed from percepts through immediate experience, synthesis, analogy and resemblance, reason also adding something."⁵ This process of reasoning Epicurus applied only to acquiring knowledge of the unknown.⁶ Thus Epicurus utilized the free activity of thought to explain error and acknowledged its function

¹ Cic. *Fin.* ii. 63.

² D. L. x. 32.

³ Cic. *Ac.* ii. 45.

⁴ Cic. *Fin.* i. 30.

⁵ D. L. x. 40, 45, 32, 59.

⁶ *Ibid.* x. 36, 39, 73; Cic. *Fin.* i. 30.

in some form in inference; but reason performed its function properly only when it accepted and worked over the data of sense truly and completely given, "adding something," but nothing of its own accord, apparently. For these new additions of this irresponsible activity seemed to Epicurus baffling uncertainties. Thus the subjective attitude was admitted, but it presented itself as an indispensable background to the ethical doctrines and as a dubious factor in the theory of knowledge. Still the acknowledgment of a subjective standpoint proved a leaven in later Epicureanism when it was united with the psychological analysis of the Academy.

2. CHANGES IN METHOD OF LATER EPICUREANS DUE TO ADVANCE IN PSYCHOLOGY

That Epicurus employed the primary principles of inductive logic is obvious and the method is clearly stated, though the term used is *ἐπαγωγή* and not *ἡ καθ'ὅμοιον μετάβασις* so common in later discussions.¹ The advance made by his followers was methodological and analytical, consisting in the formulation and verification of definite rules of procedure. But the aim of Epicurean philosophy detracted greatly from the value of the method and prevented a natural development of the system of Democritus who would rather find the cause of a phenomenon than be king of the Persians. Elimination of fear of the gods could be effected by showing various natural causes. Hence, although only one cause can be rightly assigned to a single phenomenon, according to Epicurus, the discovery of such a cause had no value for the peace of mind that was the philosopher's goal, and it belonged to the province of a soothsayer rather than of a wise man.² Epicurus, therefore, insisted that various causes may be ascribed to every phenomenon and he made no attempt to decrease the number of hypotheses; not because such an effort exceeded the power of human intellect, but because it would be of no advantage in securing tranquillity of mind. Yet this very reluctance to determine some fixed cause contributed to the development of an inductive method and to the investigation of the place of individual judgment in scientific procedure. For there are several indications that like other systems the Epicurean underwent important changes in doctrine and method.

Diogenes Laertius points out³ that there were two classes of Epicureans, the orthodox and the sophists. As Cicero praises some of the

¹ D. L. x. 59, 80, 87, 92, 104.

² *Ibid.* 114.

³ *Ibid.* x. 35.

later Epicureans for their learning and excellent literary style, the term *sophist* seems here to imply greater attention to erudition and culture on the part of these philosophers. It appears most probable¹ that Apollodorus was the head of this new movement and that the doctrines of Carneades influenced him and his followers as well as the Middle Stoa. That there was a decided divergence from some of the tenets of Epicurus is evident from a passage in Cicero.² Epicurus had urged that sense-perception sufficed in all matters except in the case of inference to the at present unobserved or the completely unobservable. The later adherents of the school asserted the need of preconceptions where Epicurus had deemed sense-perception a satisfactory criterion, since repeated observations are necessary to show that fire burns, honey is sweet, and pleasure is the good, and since preconception is "the memory of what has often appeared." Another class of Epicureans went still farther and asserted the necessity of reasoning and inference in all forms of cognition, and maintained that in philosophy arguments must be carefully investigated and proofs presented which have been logically deduced. Similar conclusions on different grounds had been reached by the Middle Stoa. To understand this growth and the further development of scientific methods in reference to the subjective standpoint it will be necessary to consider the contributions of the followers of Pyrrho and the Academy.

3. PROBLEM OF ATTENTION IN RELATION TO METHOD

A. Practical Standpoint of Pyrrho and Arcesilas

As the object of knowledge to early Greek thought was given completely and absolutely to all who had the strength and clearness of mental vision to see it, the term *ἐπιστήμη* from its earliest appearance implied permanence and stability; hence, since clear insight was the only essential, there could be no degrees of knowledge. The distinction between sense and reason and the attacks leveled against the trustworthiness of sense by the early physicists, Eleatics, and by Plato did not imply any doubt about the powers of reason, but meant that scientific knowledge could not be based uncritically on the information given by the senses. In the Sophistic period, the uncertainty was emphasized in the problem of conduct. Plato and Aristotle held that a systematic explanation of the world was attainable because a rational world exists and is knowable; yet the one gave only probable theories of the origin

¹ Hirzel *Unters.* I, 185.

² Cic. *Fin.* i. 30-32.

and nature of the world, the other admitted chance among the principles of things. The tendency of the Sophists, Megarians, and Cyrenaics was to show that reason could supply no more certain knowledge than the senses. Then Pyrrho combined all these criticisms in one sweeping statement: *ἐπιστήμη* is unattainable; all is unknown and unknowable. Every statement can be opposed by its contradictory equally valid and reasonable.

The aim of Pyrrho's philosophy was practical for it was a theory of life. For him doubt was a means, not an end. By later Skeptics the balance of evidence was employed as a method; by Pyrrho its result was considered of main importance.¹ In fact, the distinction between the manner of life and the system of teaching had not yet been made.² Pyrrho was pre-eminently an ascetic and a moralist rather than the founder of a philosophic sect. He found a solution of the demand for personal independence, which was becoming insistent, and the end of life and conduct in complete withdrawal within himself. Thus the practical aspect of philosophy became all important and a subjective point of view was deliberately adopted with reference to the objects of volition and cognition. But this subjective standpoint was the goal and summation of all endeavor. The view of it as a problem to be investigated and as of value for method was first adopted by the Skeptical Academy.

With the acceptance of Pyrrhonism by Arcesilas, a new spirit was infused into the Academy. Though in the controversy with the Stoics, Arcesilas attacked the fundamental Stoic doctrine of infallible perception and *φαντασία καταληπτική* on the ground of formal consistency, yet his very denial of an absolute criterion of truth compelled him to meet the weightiest argument of his opponents by admitting a practical standard, the reasonable or probable. Employing this test, Arcesilas asserted, a man will do his duty—an act which can be reasonably explained—and will attain happiness.³ So the clearly defined, infallible criterion, whether of epistemology or of ethics, propounded with such unanimity by all the post-Aristotelian schools at the outset, was rejected; then too, the bare acceptance of the deliverances of sense and of habits, customs, and laws, advocated by Pyrrho, was found wanting. The decision rested, after due deliberation and earnest scrutiny, with the personal judgment of each individual. Thus a first attempt was made to employ the subjective attitude as a method.

¹ Euseb. *Pr. Ev.* xiv. 18; Sext. i. 19–20.

² D. L. ix. 69.

³ Sext. vii. 158.

B. Analysis of Attention and Scientific Procedure by Carneades

The critical examination of this deliberative moment was however postponed till psychological analysis had made considerable advance. Then Carneades took his stand firmly on the basis of experience and made the attitude of the judging subject the ground of his fundamental arguments. Thus the psychology of attention was inaugurated.

In the first place, the absolute criterion of truth was assailed, not on the ground of formal consistency as previously, but from concrete experience. A criterion, according to Carneades,¹ can be nothing but a mental affection produced by what is evident, that is a presentation that reveals itself and the perceived object, just as the light reveals itself and the object which it illumines. In opposition to the dogmatists who held that the presentation of a real object is known with absolute certainty because it bears a special mark² which insures that the object is such as presented, Carneades maintained that the sign is *κοινόν*, manifested by both the true and the false,³ as can be shown from cases of illusion, hallucination and undistinguished resemblances.⁴ Therefore there is no infallible criterion and no knowledge of things *per se*.⁵ As the effect produced by things depend on their real nature, it follows that the causal relation and the course of future events cannot be infallibly determined.⁶ On such grounds Carneades held that dialectic does not lead to certainty and does not distinguish between the false and the true. In speculative matters, consequently, suspension of judgment is the only consistent attitude.⁷

In practical matters, however, the probable was set up as the general criterion. As every presentation is from some object and experienced by some subject, Carneades contended, it is, on the one hand, true if it corresponds to the object, and on the other, if it appears true to the percipient. Such correspondence can never be known with certainty, for there is no criterion as has just been shown; even if there were such a criterion, "it could not exist apart from the affection produced by what is manifested to the percipient."⁸ Therefore there remains only the determination of the criterion in relation to the subject.

¹ Sext. vii. 159 ff.⁴ Cic. *Ac.* ii. 54-58, 83, 90.² ἴδιον σημεῖον.⁵ *Ibid.* 40, 83, 98; Sext. vii. 159-65.³ Sext. vii. 403.⁶ Cic. *De F.* 32; Sext. i. 182.⁷ For Carneades' position in this matter and as regards the controversy between Metrodorus and Philo, see Hirzel III, 163 ff.; Brochard 135.⁸ Sext. vii. 160.

A presentation that appears true is probable, one that seems false improbable.¹ Of the probable presentations some are distinct and others indistinct, and only the former can be used as criterion of the truth of appearances, that is, for the majority of acts and judgments, as there is always possibility of error.² For presentations are never isolated but form a sort of chain. Thus the presentation of a man includes not only figure, size, color, movements, dress, but also his surroundings, the air, light, sky, earth, friends. Just as in making a diagnosis physicians take into account not one, but all the symptoms, so in passing judgment about a presentation, the percipient must make thorough examination of all the accompanying details, in order that these may not divert his attention. When the investigation has shown all the elements of the presented complex to be in harmony, then the presentation may be pronounced congruous and consistent.³ The third and highest degree of probability is furnished by the thoroughly explored presentation. Here the apparent agreement of concomitant sensations is not considered sufficient. Every circumstance must be examined in detail, just as in an election the people make a searching examination of the candidate for office. A thorough inspection must be made of the time, both the exact moment at which a sensation occurs and also the length of duration of the stimulus; of the spatial relations of the objects and person concerned; of the state of the air and surroundings; of the mental and physical condition of the percipient. If, after such an exhaustive exploration, the presentation seems probable, it has the highest degree of probability that can be attained.

Thus the emphasis laid upon the attitude of the subject is very marked in the position of Carneades. The psychological account of presentations, their elements and relations, and of the different degrees of certainty attendant upon the personal interest and purpose, presents the first detailed attempt at an analysis of attention. Most suggestive is the description of the attitude of a man pursued by enemies and of the swift marshaling of arguments pro and con performed by a person who on entering a dim room is uncertain whether the object on the floor is a cord or a serpent.⁴ On the basis of this analysis Carneades took a middle ground between the Stoic affirmation of absolute certainty and the Skeptic denial of all knowledge, between unqualified assent and complete suspension of judgment, between consciousness of reality

¹ Sext. vii. 169.

² *Ibid.* 170-73, 195; Cic. *Ac.* ii. 99.

³ *Ibid.* 176-81.

⁴ *Ibid.* 186-88.

per se, and of mere phenomena behind which an unknowable world of reality exists.¹ It was also from the standpoint of the judging subject that he in ethics rejected all theories of a supreme good which seemed incapable of attainment and also the Skeptic attitude of living according to instinct and custom without preference. So it was also on psychological grounds that he made his most cogent criticism of Stoic ethics.² Thus when a science of external reality seemed impossible, the science of the attitudes of a perceiving, judging, acting subject developed; in the examination of these processes were discovered methods of inference, criterion, and degrees of probability.

An illustration of the methodical aspect of the subjective standpoint on the philosophical side is given in a treatise on morality by Philo of Larissa.³ Comparing philosophy to the art of medicine, he begins by showing the advantages of virtue, just as the physician must first persuade the patient that he ought to make use of a remedy. Next the treatment of things good and bad corresponds to the physician's search for the cause and remedies of disease. Furthermore, as the art of healing aims at health, so ethics has its end, happiness. Finally, since the physician must lay down precepts for the maintenance of health, so Philo also discussed regulations of social life and the common relations of society as well as political questions in general. Here we find not mere acceptance of popular beliefs or formal concepts and analysis of these, but an investigation from the standpoint of an inquiring and judging mind.

C. Analysis of Inference in Theory of Signs by Carneades, Middle Stoa, and Progressive Epicureans

In its application to scientific methods the effect of the advanced psychological analysis incident to the adoption of a subjective standpoint is manifested in the criticism of modes of verification and grounds of certainty as treated in the theory of signs. This theory had been briefly treated by Aristotle in his Rhetoric and had formed an important part of Stoic logic as is evident from the controversy between Zeno and Arcesilas and afterward between Chrysippus and Carneades in regard to the *φαντασία καταληπτική*, which was considered an infallible criterion⁴ because the sign on the basis of which it is recognized as true is not a common but a special sign.

¹ Sext. vii. 160; cf. *Vol. Herc.* xxvi. 4.

² Cic. *Fato* 23, 31.

³ Stob. *Ecl.* ii. 40.

⁴ Cic. *Ac.* ii. 101, 103; cf. 34, 42, 84-85.

In place of this infallible sign completely and indubitably presented, to which a sound mind must give assent, a "calculus of probabilities" was developed by Carneades on the basis of his psychological analysis. The criterion of the merely probable presentation was to be employed in unimportant matters and in cases where time is not allowed for investigation. The criteria of greater probability must be used in important decisions, the third especially in ethics, science, and philosophy in general.¹ The Academic philosopher enjoyed research into the most important and hidden things (physics). Unlike the dogmatist he did not assent, believe, and affirm, but abstained from rash judgment and rejoiced in discovering what seemed probable in such matters.² As all knowledge depends on experience, the formulation of hypotheses necessarily involves induction based on the agreement of signs. For inference is founded on the agreement of signs as is the diagnosis of the physician.³ In discussing the case of the cord that resembled a serpent Carneades clearly showed that in sound reasoning a man does not judge according to common signs, but that a thorough investigation of all the signs is indispensable to discover the special sign that insures correct inference.⁴ The conditions under which the most probable inference can be drawn are analyzed in treating of the third criterion.⁵ Furthermore, inference from what has been observed to something else immediately perceived demands indistinguishability of signs, and from what is observed to what is not directly observed requires the greatest possible resemblance. Here the subjective attitude is clearly utilized in the determination of method.

Thus the modification made by the Middle Stoa in the theory of the criterion is seen to be a requirement demanded by Carneades for the highest degree of probability. Moreover, Carneades had outlined in his calculus of probabilities the chief features of the inductive method set forth by the Epicureans, Demetrius and Zeno, in the treatise of Philodemus, *Περὶ σημείων καὶ σημειώσεων*. Furthermore, besides these Epicurean criticisms of the Stoic position as supported by Dionysius of Cyrene, otherwise famous for his mathematical ability, there is also another exposition of the Epicurean standpoint that gives evidence of an earlier stage of the theories, perhaps as expounded by Apollodorus. For these reasons it may be concluded that the detailed investigation of methods of inference and grounds of certainty was provoked and largely

¹ Sext. vii. 181.

² Cic. *Ac.* 127-28; cf. 108.

³ Sext. vii. 179, 182.

⁴ *Ibid.* 187; *P.H.* i. 227.

⁵ *Ibid.* vii. 182-89.

determined by the criticisms of the Stoic and Epicurean doctrines made by Carneades.¹

The discussion of scientific methods and grounds of validity by these Stoics and Epicureans represented by Dionysius, Demetrius, and Zeno may be briefly summarized. As all existing things are divided into two classes, the obscure, which either are not manifest for the time being or else can never be directly experienced, and the apparent, there is need of signs only in the case of the former, by which their existence and constitution may be inferred from the latter by virtue of the interrelation of all things. Since things in general are classified into genera, these into species which in turn are composed of individuals, signs are either common or special. The older dogmatists, as has been noted, had insisted that correct inference must be made on the basis of a special sign and that the essential requirement was the determination of such sign. The contention of Carneades, that signs are common and that only varying degrees of probability and not absolute certainty can be attained, combined with their own advance in psychological analysis, had effected important modifications in the views of scientific methods supported by their successors.

The Middle Stoa maintained that conclusions based on resemblance of signs are never certain. As it is a matter of observation that things and properties differing from those usually experienced have been discovered,² there may also be unknown forces and substances different from those yet observed. Thus if it is inferred that all men are mortal because that is true among us, such a conclusion is not certain, just as it did not follow that the Acrothoites are shortlived because that is true of all human beings known to us. To insure certainty, it must be presupposed that beings unknown to us are similar to us in every respect; then no new knowledge is gained, no inference is made. Hence the query is raised whether a certain degree of similarity is sufficient or if absolute sameness is indispensable for correct inference. The latter is nonsense; the former gives no certain conclusion.³ The Stoics therefore concluded that only the second method, logical connection of antecedent and consequent, gives certainty. If *a* is so related to *b* that if the one is disproved, the other is sublated, then only is the inference certain and not merely probable.⁴ Such relation can be recognized only through

¹ Cf. Schmekel 340 ff.

² Illustrated by the magnet and skeleton of a giant in Crete.

³ Cf. *Criticism of Epicurean Tenets*, Vol. Herc. 5, 1-7; 20, 22.

⁴ *Ibid.* 6, 34; 3, 30; 29, 4.

reason. The Epicureans, they held, were mistaken in their assertion that such a judgment depends upon, and receives its validity from, inference based on observed resemblances.¹ Analogy is useful for it must be employed in observation and experiment;² but it does not give certainty which is afforded by logical proof alone.³

Zeno, the Epicurean, contended against the Stoics that inference by induction is the basis of all formal inference. He drew a distinction between coexistence and sequence,⁴ discussing not only the properties of kinds, general and particular, but also inferences such as, smoke is the sign of fire that may not be visible, a wound through the heart signifies death.⁵ He laid down and illustrated the principle that inferences must rise from restricted to wider generalizations, and from these descend again to particulars.⁶ He acknowledged that such a method gave only probability; but also asserted that there is no other means of gaining new knowledge.⁷ To the Stoic query: How can there be valid inference from the observed to the unobserved when it is impossible to know all cases and it does not suffice to know merely some, he replied that it is necessary to observe what is inseparably connected with each phenomenon.⁸ Experience is the test of experience. Experience teaches that in some cases observation of one characteristic is sufficient to pass a judgment about the unknown; in others, several observed resemblances give no basis for inference.⁹ False conclusions are corrected through experience, that is, by observation of phenomena.

The Stoics then urged that observation alone is not enough; certain inference depended on a general law which is grasped only by reason. In fact, the Epicureans implied that the basis of inference is found in the nature, peculiar characteristic, or uniformity on which the Stoics laid such stress; no clear formulation of this causal connection, however, is found in the fragments. It is, therefore, noteworthy that in Lucretius no principle is more emphasized than the constancy of nature. "It is absolutely decreed according to the conditions of nature what each thing can do and what it cannot do."¹⁰

These Stoics and Epicureans, then, did not merely accept the deliverances of reason and sense in their search for the unknown. Observation and comparison were completed by the insight of reason in the one case;

¹ *Ibid.* 7, 5.

² *Ibid.* 32, 34; 34, 1; 35, 5, 27.

³ *Sext. P.H.* ii. 99, 103-4.

⁴ *Vol. Herc.* 2, 7; 5, 12, 36.

⁵ *Ibid.* 36, 2; 1, 35.

⁶ *Ibid.* 5, 7, 23.

⁷ *Ibid.* 5, 30, 3.

⁸ *Ibid.* 37, 26.

⁹ *Ibid.* 26-31.

¹⁰ *Lucr.* i. 586; v. 677-79; cf. vi. 29-32.

in the other, rational scrutiny was required for sense-experience, and some elucidation had been given of the contributions of reason which had been only a problem to Epicurus. These significant modifications in their scientific methods are clearly due to an inspection of these modes of procedure from a subjective standpoint.

It was not merely a theoretical interest that aroused these discussions about the theory of knowledge and the methods of investigation and demonstration. In connection with the work in history, geography, and mathematics that engaged the philosophers of this period, the examples used in the disputes about the validity of inference deserve notice. They deal with characteristics of men under varying conditions, plants in different climates, minerals, and laws of number. Zeno's criticisms of the principles of geometry were perhaps called forth by the arguments of Dionysius whose mathematical achievements were celebrated, and his own views of mathematics were based on his empirical method. The controversy between Carneades and the Stoics about the basis of moral laws, whether reason or utility, was not mere dialectical sword-play, but a vital question, as the modifications in doctrine and divisions among the leaders of the Stoa suggest. As the ethical tenets were made more adapted to the needs of the time, so in specifically political doctrines an attempt was made to reconcile cosmopolitanism with the actual conditions. The steady growth of Rome and the contrast between the position of this great power and the political impotence of the Greek cities led these philosophers to consider the nature of the best state and the value of government. As the discussions in the Scipionic circle left their impress upon the political theories of Panaetius, Posidonius, and Cicero, so the problems and the interests of the period influenced the general trend of thought in turn. The effect of Greek philosophy on Roman law as a whole was significant and especially important in the creation of a *jus naturale*. Sophocles and Socrates had enunciated the principle of universal law; the Stoa developed it theoretically and practically. Then the Skeptical Academy worked out the theory of probability, the basis of jurisprudence. "Greece had philosophy, but no jurisprudence. . . . It was Rome that first introduced the maxim that judicial decisions must be guided by general principles and not by impulses of the moment." The Roman praetors first decided cases in accordance with their own law which was not suitable for non-Romans. Then by aid of Greek philosophy the juris-consults created the *jus naturale*. "If Rome laid down the proposition that laws were to be applied in accordance with fixed principles, Greek philosophy taught

the judges how to group the particulars under general rules."¹ Interesting in this connection is the account of the development of civilization and the origin of institutions, social, political, and religious, given by Lucretius.² He has transferred the Greek cosmic strife into the life of man and thus anticipated Hobbes. His aim is to help men, to free them from the supreme evils, superstition and fear of death. Epicurus is to him a god not because he has added to the knowledge of the world, but rather because he has brought freedom to the human spirit. Thus in every line of thought a change of viewpoint is evident. With the dissolution of tribal and customary institutions incident to the social and political changes, and the consequent bankruptcy of many in beliefs and tenets, the individual was thrown back upon himself, and the analysis of his own attitudes became imperative.

It is convenient at this point to recapitulate the phases of this movement in which the development of the subjective point of view is most conspicuous. Epicurus, starting on an empirical basis, had attributed to sense the capacity of grasping infallibly things as they are; inference to the unknown must begin with, and return to, this incontrovertible basis. The reason for such a position becomes manifest when it is taken into consideration that the foundation of his ethics was freedom of the will. Therefore reason might make modifications "of its own accord." Here is the essence of subjectivity; but he made no attempt to determine the relation of the process of reasoning to this brute sense-material. In ethics the stress was placed on immediate feelings though the importance of the quality of pleasure was made prominent; in the theory of knowledge the need of regulations and principles became evident as the function of reason was accentuated especially by the criticisms of the Skeptical Academy. A similar attitude is reflected in the treatment of scientific method. Logical inference was to be applied only to the unknown which was rigidly restricted and no attempt was made to determine the relation of this irresponsible rational activity to sense-experience or to analyze its mode of procedure. The Pyrrhonists had withdrawn into the "field of self," abandoning all cognitive problems as insoluble. Assuming a similar standpoint, Arcesilas constrained by the requirements of practical life endeavored to utilize the subjective attitude methodically. With Carneades the problem of attention became the focus of interest while he tried to find grounds and limits of inference by analyzing concrete acts of judgment. Thus the subjective standpoint was definitely utilized for developing a scientific method. From

¹ Holm *Hist. of Gr.* IV, 498-524.

² Lucr. v. 771-1457.

this vantage-ground the analysis of methods of investigation and demonstration was conducted. Here both Stoics with their insistence on logical proof and Epicureans with their emphasis on actual observation and experience discovered a common starting-point in their attempt to ascertain the basis of correct inference.

4. DEMOLITION OF DEDUCTIVE ANALYSIS AND FORMAL SCIENTIFIC CONCEPTS BY THE SKEPTICS

A. Destructive Criticism of Scientific Concepts by Aenesidemus and Agrippa

It has already been shown what influence the Skeptical criticisms, more specifically the arguments of Carneades, had on the Middle Stoa and their Epicurean opponents. The radicals among the latter seem to have yielded to the more orthodox members and the school as a whole apparently abandoned the bolder scientific researches. Progress along this line, however, was made through the labors of Skeptics and physicians of the Logical and Empirical schools. With Antiochus the dogmatism of the Middle Stoa triumphed in philosophy. He was a conservative of conservatives and an acute champion of purely formal analysis. Stoicism in its earlier stages had given evidence of the interaction of the theory of absolute truth and certainty with the social-political tendency to cosmopolitanism and the undermining of traditions and customs. That the formal concept was dominant at first is evinced by the advance of the exact sciences, mathematics and astronomy. But the importance of assent in all forms of judgment and activity was accentuated as psychological analysis was quickened by Skeptical criticisms. When the contrast between the ideal of science and the variability of practical conditions was brought to consciousness, self-examination led to discrimination between truth and certainty¹ and to an investigation of the validity of all inference in a theory of implication (signs). The empirical basis and the problematical character of social life were brought into sharp opposition with the ideal of method and knowledge. Hence the fact that Antiochus, while trying to reconcile two diverse phases of thought, attributed the greatest weight to the practical argument is an indication of the trend which philosophy was taking. In the treatment of scientific methods this same tendency was manifested in the joint labors of the Skeptics and Empirics. For the apparent triumph of dogmatism, when Antiochus became president of the Academy, brought about a strong reaction on the part of Pyrrhonic Skepticism, which had

¹ Cic. *Ac.* ii. 111, 58, 73, 119.

been in abeyance during the ascendancy of the Skeptical Academy, in the person of Aenesidemus, a former member of the Academy.

Now began the formulation of a correspondence theory of knowledge, on which was based the demolition of prevalent scientific methods on formal grounds. Identifying reason with sense and considering the latter universal, Aenesidemus defined true appearances as those appearing in the same way to all, while those appearing only to particular individuals are false. Thus his criterion, the sensuous counterpart of the rational standard set up by the Middle Stoa, was the harmonious judgment of all normal individuals. For he maintained that it is possible for the individual to say how the external objects appear to him, but not what they are in themselves. In the ten tropes he made a clear and comprehensive arrangement of his arguments: difference in sense-organs, divergent emotional reactions, diverse modes of judging, variations in aesthetical and emotional values.¹ From these tropes it is evident that Aenesidemus implicitly assumed things qualified by all sensuous, aesthetic, and value attributes existing independent of the subject. Being always in some relation to the subject in the act of knowing, things in themselves cannot be known.²

On this same basis, Aenesidemus formulated a systematic line of arguments to show that there is no absolute truth, no causality, and no demonstration. The proof is consistent and cogent, as long as truth and cause are taken as absolute entities.³ The dogmatists, however, asserted that causes may be known from their effects, that phenomena are the signs of the reality of causes as being their effects. Aenesidemus replied that no such absolutely necessary relation can be proved by the criterion of the agreement of all normal individuals.⁴ Thus while taking part in the controversy about scientific methods carried on by the Stoics and Epicureans, Aenesidemus proceeded like a dialectician, demolishing a logic of consistency dealing with absolute entities. The outcome of his destructive criticism was virtually to destroy logical entities and the formal method which he used, and to leave for both theory and practice an empirical procedure⁵ that gave scope to individual initiative and judgment.

A purely analytical method of criticism became dominant in the Skeptical school with the five tropes of Agrippa, a systematic attack on the reasoning process nominally, but in fact an assault on sheer analysis,⁶

¹ Sext. *P.H.* i. 40-144.

² *Ibid.* i. 139-40.

³ *Ibid.* viii. 40-48; ix. 218-27.

⁴ *Ibid.* viii. 215.

⁵ *Ibid.* vii. 349-50; viii. 216.

⁶ *Ibid.* i. 177.

for they are illustrations of analysis carried to its utmost limits. Thus Pyrrhonic Skepticism began with the denial of absolute knowledge on the ground of contradictions in sense-perception and general beliefs, man himself being a part of the discord; then came a systematic formulation of these arguments which implied that things in themselves correspond to things as known except as regards the relation to the knower; and on this basis it was shown that the demonstration of the truth of things unrelated to the subject that perceives and knows is futile. Finally, the modes of reasoning were abstracted and treated as independent of the material to be related. The mind had been set over against the thing which, when known, was not itself but affected by that relation. Thus the theory of objects of knowledge constituting absolute entities was being gradually demolished by carrying out to its logical limits the method by which it was established.

*B. Criticism of All Speculative Systems on the Basis of Real and Phenomenal, and Outline of a Method of Applied Science:
Sextus Empiricus*

For this same method of purely formal analysis was soon being applied not merely to sense-perception and reason as such, but to specific systems of thought. Thus in Sextus Empiricus the logic, ethics, and physics of all schools are criticized on this ground, by presenting arguments of equal strength for and against every doctrine. The Skeptic's doubt, however, does not include phenomena, things as they appear to and affect him; every statement made applies only to his own subjective states.¹

Both phenomena and things in themselves were included under the general term, *πράγματα*.² Phenomena or *φαντασίαι* were regarded as things in relation to the subject, objects of which he is conscious. Within this limit, the term indicates varying degrees of relation, from well-nigh complete severance to a purely subjective state. It is in this sense that the phenomenon is the Skeptic's criterion; for it cannot be doubted as it is based on susceptibility and involuntary affection.³ From the fourfold observance of phenomena it is clear that the term was not restricted to sensuous appearances but included moral, religious, and aesthetic values.⁴ In general then the Skeptic made relation to

¹ Sext. i. 13, 15, 190, 198, 200.

² *Ibid.* 12, 31, 190.

³ *Ibid.* 19-22, 190, 197; cf. D. L. ix. 107.

⁴ It may be mentioned that the term also means percept in contrast to concept, and in contrast to *ἄδηλα* that which is clear, distinct. i. 9; viii. 216; ii. 124; iii. 266, etc.

consciousness the distinguishing mark between phenomena and things *per se*. The latter are the unknown things investigated by science, indeterminate and incomprehensible.

While the distinction between things *per se* and phenomena had at first been limited to objects of sense-perception, Sextus applied it to the whole field of philosophy, an attempt that was facilitated by the logical tropes of Agrippa and that rendered easier destructive criticism. In view of the importance assigned to ethics during this whole period, the critical method used by the Skeptics had to stand its severest test at this point. Though ambiguous expressions¹ predominate in the ethical treatises of Sextus, not only is the knowledge of ethical values *per se* combated, but their existence is doubted or denied.² The whole argument rests on the presupposition that if there are such objective moral values as maintained by the dogmatists, they must be entities endowed with specific attributes just as the material objects and all individuals must recognize and accept them in the same manner. But a good that is the absolute good of all cannot be discovered,³ and good has a meaning only as related to the individual will. So from all sides the knowledge of things *per se* was refuted on formal grounds, and the conflict between absolute entities whose reality is vitiated by entering into relation with a conscious subject and the world as experienced by that subject gave rise to a situation in which the individual recognized the real for him in his own consciousness and just for this reason disdained it as phenomenal.

Having demolished all systems of speculation by this sheer analysis, the Skeptic limited himself to an empirical mode of life without expressing any firm conviction. When differences in beliefs and customs were first prominently emphasized, personal conviction was made responsible for all affirmations, opinions, and regulations. The Socratic schools had put the stress on the universal, permanent, impersonal element while they admitted the personal contribution in various forms. In later Stoicism the personal judgments⁴ filled the largest place; they formed the inalienable part of the individual because he participated in the universal reason. Moreover, what was originally expressed as personal conviction,⁵ by the acquiescence of a large number acquired a higher degree of certainty, as is most clearly shown in the criterion of the Middle Stoa, of Aenesidemus and the later Skeptics. The Stoics, especially, deemed general agreement of high importance. For in their opinion conceptions exhibiting logical consistency must correspond to

¹ iii. 178, 190-91, 278; xi. 18-19, 69-78, etc.

² xi. 69-86; iii. 184-86.

³ xi. 6, 83-86.

⁴ δόγματα.

⁵ δόγμα.

reality. Hence subjective convictions became objective truths. Sextus, in opposition to the Dogmatists, distinguished the general meaning "assent to feelings that necessarily result from sensation" from "the acceptance of any opinion in regard to the unknown things investigated by science." Such assent may be a personal feeling, an indefinite impression or else a firm conviction. The Skeptic admitted that the former was unavoidable;¹ but he rejected positive assertion. So far, then, the Skeptic definitely adopted the subjective standpoint, but did not utilize it in any way.

But these later Skeptics did not restrict themselves to following passively the guidance of intelligence and affection, laws and customs. The Skeptic had rejected the logical criterion for distinguishing between the existent and non-existent, the true and the false. He admitted a practical standard as a basis for action in ordering life.² The Skeptic's daily life was directed by the natural suggestions of intelligence, by the necessity of affections and feelings, by laws and customs, and by arts, and these four criteria were to be heeded in an unprejudiced way.³ The admission of the pursuit of certain arts is significant. Sextus acknowledged the value of training and learning that were practically useful, rejecting pure mathematics, astronomy, astrology, but admitting grammar, calculation, meteorology. So while Stoicism was trying to satisfy the moral and religious needs, the Skeptic of the Imperial period, free from the fetters of impossible theories, made a philosophy of everyday routine on the basis of practical utility, and sanctioned only a method deduced from, and applying to, immediate experience.

5. PERSONAL EXPERIENCE MADE BASAL IN SCIENTIFIC PROCEDURE BY EMPIRICAL PHYSICIANS

A. Early Stages of Empirical Method; Influence of Psychological Analysis

While on the theoretical side the rejection of absolute knowledge, logical methods and criteria led to the establishment of methods and standards based on personal judgment and experience, a similar movement along more strictly practical and scientific lines was taking place through the labors of the Empirical physicians, who were closely allied in method to the Epicureans and Skeptics. The mutual influence of medicine and philosophy was frequently noticed by ancient writers.⁴ As

¹ Sext. i. 13, 19, 197.

³ *Ibid.* i. 21-24.

² *Ibid.* vii. 29-30.

⁴ Cf. Celsus *Praef.* 2; Tertul. *De An.* 2.

early as 500 B.C. there were public physicians in the Greek cities¹ and references to the art of medicine are numerous in philosophic literature. It has, therefore, been suggested that the art of medicine served the same purpose in ancient philosophy that mathematics and the natural sciences serve in the thought of the present day. While the physicians were taught by their art the importance of observation and experiment, they also learned from the philosophers the method of exact formulation and definition, which being carried to an extreme led some, who cited Hippocrates as their model, to react against definitions, demonstration, and all formal logic and to endeavor to submit the art of medicine to the test of experience alone.² Whoever was the founder of this Empirical school, the movement seems to have begun about the middle of the third century before our era.³ The three principles which formed the basis of the Empirical method as stated by Serapio were explained by Glaucias in a treatise entitled the *Tripod*.⁴ The next important representative of this school was Heraclides of Tarentum, a contemporary of Carneades and Zeno, the Epicurean. How far he was affected by the theories of Carneades cannot be ascertained; but it is certain that the latter was acquainted and agreed with the methods expounded by the Empiric.⁵

The account of the Empirical method given in Celsus and Galen belong to a later period and it is precarious to interpret the beginnings of a system by its more developed stages; still the fundamental principles may probably be safely referred to the older expounders of the method as they agree with the general philosophic development. According to the Empirics, the science of medicine must be based on experience, on the observation of things and causes manifest to the senses, and on the memory of similar facts.⁶ The general definition of experience was "the memory of those things which have appeared frequently and in the same manner." The Empirical method consisted of three parts: the individual observation, the recorded investigation of other observers, and inference by analogy. At the occurrence of new forms of disease, the recorded observations fail and personal examination becomes the only resource. Hence arises the need of a comparison of similar and familiar experiences in regard to diseased parts, symptoms, and remedies.⁷ Thus the reality and value for knowledge of individual experience began to

¹ Herod. iii. 131.

² Galen 525K; 77K; Sext. viii. 327.

³ Celsus *Praef.* 3; G. 674K.

⁴ *Subf.* 63, 13; 66, 1.

⁵ Cic. *Ac.* ii. 122; Sext. vii. 179.

⁶ *Subf.* 36, 46, 49; C. 5; G. i. 65, 73.

⁷ *Subf.* 1, 39-41; G. xiv. 677.

be recognized. Whether the oldest inductive logic began with Aristippus or Protagoras,¹ its development can be traced through Aristotle,² Epicurus, and Empirics. But the formulation of the method was attempted and demanded only after the psychological analysis instituted by the investigation into the problems of knowledge had received its impetus from the criticisms of the Skeptical Academy leveled against the doctrines of the Epicureans and Stoics.

*B. Value of Individual Experience Emphasized and Occult Causes
Rejected by Celsus*

The further development of the inductive method was due to the co-operation of the Empirics and Skeptics. In the first century of our era, Celsus founded his Empiricism on the ten tropes. This famous physician is an excellent example of that union of Skepticism with Empiricism that was becoming so prominent during the Roman Empire. His position is characterized by a desire to get away from dogma and to recognize the value of individual experience in the art of medicine, an attitude first suggested by the work of Hippocrates. Like the Skeptics he was seeking truth but found that there is no absolute truth but only probability; for the variations and contradictions in things produce doubt. The senses are deceitful; then, too, no help can be obtained from philosophers, for they also disagree. The ignorance of the how and why is most evident. Everything can be viewed from two sides, and the evidence exactly balances. In medicine, therefore, the treatment and remedies used depend on ever-changing circumstances.³ Accordingly experience can be the only guide. This is the justification of the Empirical Tripod and the abandonment of the search for a hidden "nature" on the ground of its incomprehensibility. It is not a question of how we breathe, but of what will cure labored breathing. Diseases are healed not through dialectical skill but through remedies, just as the husbandman and helmsman are trained not by disputation but by practice. The essential matter is not what causes the disease, but what dispels it.

According to Celsus, physicians who believe in change and variability are Empirics, those who do not are Dogmatists, adherents of the Logical school of medicine; the difference between them is manifest in the mode of medical treatment. "Those who call themselves Empirics limit themselves to evident causes; they contend that the investigation of hidden

¹ Gomperz II, 237; Natorp 149; *Pl. Rep.* v. 516c.

² *Anal. P.* 87b, 28; 90a, 24.

³ *Proem.* i. 5, 32.

causes and processes is futile, for the nature of things is incomprehensible." The phenomena are objects of examination; all reference to properties and forces which cannot be directly observed must be banished.¹ On account of the continual change to which everything is subjected, no invariable prescription can be given; even after careful observation and treatment, the expected result does not always ensue. Hence the physician must vary his methods and try different remedies again and again.² The art of medicine is based on conjecture³ and, while the hypotheses often work successfully, they sometimes fail. *Conjecturalem artem esse medicinam*.⁴ The physicians of the Logical school not only dissected dead bodies but vivisected criminals. The Empirics, on the other hand, insisted that such procedure was both cruel and useless. The futility was argued not merely from change and variability in general, but on ground of the shifting, transitory affections that the living being experiences.⁵ Here the reaction against the conceptions of things in themselves and of a permanent unchangeable "nature" is based on individual experience both observational and introspective. The attempt to refer both method and analysis to experiencing subject finds here a practical counterpart to the philosophic movement in Roman Stoicism.

C. Experimentation Based on Individual Experience: Galen

Though medicine must always to some extent have been an experimental science, at the earlier stage the purpose of experimentation was to demonstrate, or rather analyze into their presuppositions, propositions acquired by intuition or formal deduction—a position generally maintained by the Logical school. During this period as a result from the change in standpoint, an attempt was made to build up theories by means of careful observation and experiment. Celsus had endeavored to reject the fixed dogmas which hampered the advance of the science. This reform was continued by Galen, who made great progress in experimentation. Contrary to the accepted usage of the day Galen insisted that no matter how distinguished the authority, no man of intelligence would deem it right to give credence to the statements without proof.⁶ Galen had as little patience with dogma as Sextus. He insisted on facts as over against theories.⁷ Thus in his arraignment

¹ *Proem.* i. 5, 18.

² *C.* iii. 90-91.

³ *C.* i. 7, 20-27; *Cic. Ac.* ii. 122; cf. *G.* viii. 721K.

⁴ *Plac.* 286.

⁵ *Ibid.* 75; vii. 273.

⁶ *Ibid.* i. 8, 25; iii. 38, 17.

⁷ *πράγματα οὐκ ὀνόματα.*

of Chrysippus for his lack of consistency and introspective analysis in his treatise on the *ἡγεμονικόν*, he also severely criticized the Stoic for using quotations without bringing evidence to prove the assertions.¹ So he also refused to accept the various theories about soul that were in vogue in the different philosophic schools because he could not reconcile them with the observed interaction of soul and body.

It is, however, in his experiments that the effect of the new attitude is most clearly shown. Though he opposed fixed dogmas, Galen believed that a fortuitous combination of atoms could not account for the universe and that the guidance of a wise Providence guaranteed the results of experiments when uniformity had been duly observed. He proved the functions of the brain and nerves by the different effects of injury to the brain and to the heart which had previously been considered the seat of mental activity.² He also examined the structure and function of the different sense-organs, laying special emphasis on psychological analysis.³ In his dissections and vivisections he made use of animals and corpses and supported his theories by experiments. He worked in a scientific spirit, on the principle that the physician is a servant of nature.⁴

The definite formulation of this inductive method was the result of the combined labors of Skeptics and Empirics. The Empirical tripod was made the basis of this methodology. The first stage, personal observation, was divided into three phases:⁵ direct and accidental experience of some treatment that is either beneficial or injurious; intentional experimentation with different remedies; trying the remedies thus discovered in various cases. Such individual investigation must be supported by the experience of other observers.⁶ When, by experimentation in a number of cases, the regularity of the effects is demonstrated, then a rule may be formed and a system of such rules constitutes an art.⁷

D. Scientific Development of Inductive Method by Menodotus; Logical Formulation by Sextus Empiricus

The scientific development of this method was chiefly due to Menodotus. According to him, since the same remedies do not always bring the same result in similar diseases, it does not suffice to enumerate

¹ *Plac.* 312-19.

³ Cf. *Ar.* ii. 855-60.

² *Ibid.* 300-301.

⁴ *G.* xvi. 35.

⁵ (1) *περίπτωσις*; (2) *αὐτοσχέδιον*; (3) *μιμητική*; *Subf.* 36; *G.* i. 66.

⁶ *ἱστορία*.

⁷ *G.* i. 66; *Subf.* 88.

the favorable results, but it is necessary to observe whether the same remedy produces the same result always, frequently, or rarely. The physicians of the Logical school also admitted inference from similar cases but claimed that knowledge of the real causes can be attained only through logical proof. In opposition to them the Empirics used the term *inferential reasoning*¹ to designate the method of discovering phenomena temporarily obscure (not the intrinsic nature), and contended that they did not use demonstration but observation. They acknowledged that such inductive inference afforded probability not certainty.² But when experience has verified such inference, even though it be only in a single case, practical certainty is obtained. Thus the Empirical method as practiced by Menodotus did not employ mere observation of facts nor purely logical inference but a combination of the two. For the Empirics, like the Stoics before them, recognized the need of reasoning in the repetition of experiments but maintained that only sequences, and not occult causes, became known in this way. Hence the Empirical method had made a decided advance over that of the Stoics and Epicureans already discussed, because it made use of the subjective attitude. Among the Empirical physicians the method of induction which had been given its greatest impetus by the psychological analysis quickened by Skeptical criticism, particularly of Carneades, reached its climax in ancient times.

In Sextus we get the logical form of this method in his theory of the so-called *reminding* or *suggesting signs*.³ Things which are directly and immediately experienced or are entirely beyond experience have no signs; no demonstration applies to them but only to things that are for the moment not perceived or those that are by nature capable of being observed only indirectly.⁴ To the latter, the Stoics applied the *indicative* signs; for example, the movements of the body are signs of the soul. In the hypothetical syllogism the indicative sign forms the antecedent and the thing signified the consequent.⁵ Against this form of inference Sextus made a determined assault.⁶ For the Skeptic admitted only the reminding sign by which things temporarily unobserved are inferred. Such inference proceeds by the law of association of ideas which reminds us of what we have perceived in connection with the object in question. Thus smoke suggests the presence of fire, the scar the previous wound. Having often observed phenomena connected, as soon as we perceive the one, memory suggests the other which

¹ ἐπιλογισμός.³ σημεῖα ὑπομνηστικά.⁵ *Ibid.* 101-4.² *Subf.* 66; G. i. 77K.⁴ *Sext.* ii. 97.⁶ *Ibid.* 144, 196, 204-7.

is not visible. The illustrations are again the familiar examples of smoke and invisible fire, the wound in the heart which indicates death.¹ Sextus even goes so far as to permit the search for a cause according to this method. "In medicine if we know that a wound in the heart results in death, it is not as the consequence of a single observation; but having noticed the death of Dion we also observe the death of Theon, Socrates, and others resulting from a similar cause."²

6. SUMMARY: CHANGES IN THE CHARACTER OF THE UNIVERSAL; IMPORTANCE OF INDIVIDUAL EXPERIENCE; THE NATURE OF A PROBLEM

It is, therefore, evident that important changes in method had been wrought during the post-Aristotelian period and that the attitude of the Empirical physician differed widely from that of the early scientific investigator. The freedom with which the first Greek thinkers approached their cosmological problems was as remarkable as the absence of method to test the bold theories which they fearlessly propounded. So there existed the paradoxical situation of a distinctly deductive method together with inaccurate statements of facts. After the time of Socrates, when scientific thought became conscious of itself, we find a remarkable coincidence in the procedure presented in the dialogues of Plato and the logic of Aristotle on the one hand and in the Euclidean geometry on the other.

In these disciplines solutions were analyzed by being traced back to the fundamental principles from which demonstration could be made. Such propositions on all manner of subjects, physical, mathematical, political, ethical, had been obtained intuitively, and when they were involved in practical problems the demonstration was accomplished by their analysis into presuppositions. Science, therefore, dealt with results virtually given and in this form of proof worked out a complete method of geometry and logic. These theories remained unquestioned because they were held dogmatically, being neither constructed nor altered by observation.

This ancient subsumptive method, then, required a general concept completely given. The universal must be there to begin with. The investigator's function was to clarify the universal as it appeared in divergent phenomena. As Aristotle asserted, final causes must be known in order to make observations. If the universal is clearly perceived and accepted, the conclusion logically follows from the definition; and the observed fact, or the experiment, is an instance, and not the

¹ Sext. viii. 153-54.

² *Ibid.* v. 104.

determining factor, of the theory. Such a view was due not only to the treatment of the universal but also to absence of personal observation as a part of scientific method. The Socratic and Aristotelian theory of knowledge made the typical and not the individual significant for cognition. It was not only that the experiences of different individuals must be explained as something more than individual to become scientific; for the Greek of the Socratic school individual experience, out of which science arises, had no value as experience. Reality, Plato held, belongs to the idea as such and it receives no validity from the world of becoming. Aristotle made the advance of assigning reality to the universal as embodied in the particular. But though he attributed great value to observation, the phenomenal was not known till it assumed the form of a fixed universal. Thus the reality and value for knowledge of individual experience could not be recognized.

Hence the change of attitude toward the nature of the universal and the function of inner experience which gradually took place in the post-Aristotelian period was due to the development of the field of inner experience. With the study of psychology, there entered an appreciation of personal experience; as the field of introspection broadened, criticisms of eternal verities became prevalent. Epicurus had admitted various theories to explain phenomena; therefore the universal proposition need not be necessarily considered unalterable. When the psychological investigation of judgment improved, suspicion of dogmatic principles was intensified, so that finally only practical precepts and techniques were admitted. As the Empirical physician made greater use of investigation and experiment to test the formulas accidentally or intentionally discovered, the value of individual experience was more clearly recognized. Established theories were no longer baldly accepted and facts given as illustrative instances. The fact, not the unknown, was the problem for the later Skeptics and Empirics and here true scientific method arose. No other field of investigation was so definitely scientific as Empiricism. Yet its development was impeded for several reasons. Not only were there, as is usually the case, accepted theories which had not arisen out of scientific observation and therefore could not be tested; the phenomena under investigation were so intricate that they presented almost insuperable obstacles to the testing of the method. Besides, the social and political conditions were not favorable to the advance of scientific procedure.

IV. THE SUBJECTIVE ATTITUDE AS A BASIS OF METAPHYSICS

I. GENERAL CHARACTER OF THE IMPERIAL PERIOD

The most characteristic feature of the philosophy of the Imperial period was its religious character, and so the metaphysical aspect was again becoming prominent. The whole attitude toward the divine had changed. God was no longer an intellectual postulate, but a moral necessity. It was not a new problem, but the problem had assumed a different form; for a spiritual revolution had been taking place alongside of the social and political changes. Spiritual needs had become more clamorous, and moral life more self-conscious. Material progress and municipal life were the chief external characteristics of this age; its intensely social life centered in the city and club, rather than in the state or family.¹ Against the materialistic standards and aspirations of such a period there arose a powerful protest in a widespread reaction against the vices of the great cities, in a growing belief that amendment was required, in the formation of religious guilds, in the bewildering multiplicity of religions, and on the philosophical side, in the revival of Cynicism and the reconstruction of Stoicism. The necessity of moral reformation was pressed home by such earnest teachers as Apollonius of Tyana, Musonius, Plutarch, Dion Chrysostom, and by stern Cynics who claimed they were "ambassadors of God." This movement was not restricted to the intellectual aristocracy. Says a well-known writer:² "Common ignorant folk have caught the passion for apostleship. Everywhere might be met the familiar figure with the long cloak and staff and scrip, haranguing in the squares or lanes to unlettered crowds. And the preacher is often as unlearned as they, having left the forge or carpenter's bench or the slave prison to proclaim his simple gospel of renunciation with more or less sincerity." Thus on all sides it is evident that the ideal of conscience developed within the limits of classic life. On some characters the times produced a feeling of neglected duty that awakened a sense of sin which both occasioned and was fostered by the Oriental cults. Another indication of the same tendency was the increased importance attached to omens and dreams. Others again sought comfort in the hope of a future life. Some rejected such a

¹ Cf. Dill *R. Soc.* 192-286.

² *Ibid.* 342.

belief; on the whole, however, the desire for personal immortality became more intense toward the latter part of the period. Simultaneously with this moral and religious revival, philosophy entered on a new phase as manifested in the reconstructed Stoicism and more especially in neo-Platonism.

2. NEO-PLATONISM: METAPHYSICS BASED ON PSYCHOLOGY WITH EMPHASIS ON INTELLECT

A. *The Rise of Neo-Platonism*

From the beginning of the second century, the combined movement of neo-Pythagorean and Platonic philosophy can be definitely traced. As a philosophic system Pythagoreanism had disappeared, though its *ἄσκησις* seems to have continued. Its doctrines, however, were revived earlier, about the first century before our era, when numerous treatises appeared under the name of Pythagoras or his immediate disciples. Two different tendencies can be distinguished in this literature, the one revealing distinctly Platonic-Aristotelian principles, the other Stoic.¹ The latter movement has with great plausibility been traced back to Posidonius' commentary on the *Timaeus* of Plato; and the former to the polemic of Antiochus against the Stoic interpretation.² The origin of this controversy seems to have been the question of the eternal existence of the soul and the world, a problem that may well have arisen when so many cherished beliefs and fundamental principles were subjected to criticism. Carneades, calling attention to Plato's contradictory statements in the *Timaeus*, had maintained that whatever is created must also perish. Being unable to refute this argument, Panaetius rejected both the pre-existence and the immortality of the soul, while Posidonius upheld the opposite view in his commentary on the *Timaeus* in which he developed his Stoic interpretation of the Pythagorean-Platonic philosophy. These discussions may also explain the lively interest in the *Timaeus* in Cicero's time. For during the last century of the republic, marked by civil wars, decay in religious beliefs, and demoralization especially among the higher classes, Epicureanism became popular. The poem of Lucretius shows how this philosophy combined with religious skepticism to stifle the hope of immortality, and that he was not the only adherent of the school is abundantly proved by Cicero as well as by the fact that "Caesar could assert before the senate without fear of contradiction or disapproval that death is

¹ Cf. Sext. *Phys.* ii. 281.

² Schmekel 408-28.

final.”¹ For this reason, Cicero vigorously attacked Epicureanism and drew upon Platonic, Peripatetic, and Stoic sources to subvert its doctrines. The later Peripatetics had dogmatically denied immortality and Panaetius had abandoned the older Stoic theory of limited after-existence so that support of the craving for prolonged existence could be obtained only from Pythagorean and Platonic doctrines.²

With the growing revival of belief in a divine power on moral grounds, as popular theology failed to satisfy the quickened moral intuition and Stoicism seemed to many to give an inadequate interpretation of the mysteries of God and of man’s destiny, the revived Pythagorean and Platonic philosophy acquired great influence through its attempt to justify and unify pagan faith. So while empirical Skepticism was assailing with might and main the ideal of absolute verities and urging the adoption of popular standards and the pursuit of practical arts without delving into metaphysical mysteries, a stronger positive movement (of which in philosophy we catch a glimpse in Cicero’s attitude toward the ethical systems and in Plutarch’s emphasis on the theological rather than on the ethical aspect) came to full development in the system of Plotinus. Though he incorporated many elements from Stoicism and maintained that his philosophy was based on a correct interpretation of Plato, he endeavored in fact to found an immaterial monism on a psychological groundwork.

B. The Soul-Body Relation as a Problem

Plotinus made psychology the starting-point; from the soul as a center it is possible to descend to the world of sense and to ascend to the ineffable One.³ By Plato the dualism which had become apparent to philosophic thought had been focused on the distinction between sense and reason as based on the discrimination of their respective objects. But in the succeeding development we have noted the gradual change of stress until in Plotinus the opposition between soul and body formed definitely the point of departure. By showing that soul cannot be described in terms applicable to body and its qualities, he attempted to prove that the soul has real existence apart and distinct from the body and corporeal modes of being.⁴ The argument may be summarized: It is impossible to explain life as product of an aggregation

¹ Cic. *Cat.* iv. 7; Sall. *Cat.* 51.

² Cf. *Somnium Scipionis*.

³ *Enn.* iv. 3, 1.

⁴ *Ibid.* ii. 4; iv. 2.

of atoms or of material elements, for in either case it could possess only the qualities of its particular form of matter, and as all bodies are composite, it would not be a unity.¹ It is equally impossible by means of insensate elements to account for apprehension, sensible or intellectual, and for sensations of pleasure and pain, or even to demonstrate that soul is body.² Isolated parts of a material mass can have no knowledge of what is suffered or done by other parts; such power can belong only to a percipient who is a self-identical unity. Even if it be not granted that thought is a perception of intelligibles, still how can intellect which is magnitude understand that which is not magnitude,³ as, for example, concepts of the beautiful and just? The unity of the soul is not that of spatial continuity with different parts, each in a different place, nor that of quality, as color, which may be in various discontinuous bodies. In its relation to body the soul is "all in all and all in every part."⁴

The consequent difficulties about connection and interaction of body and soul Plotinus fully recognized.⁵ The divergence from Aristotle, who, feeling that the separation between soul and body ought not to have been made, conceived of an embodied individual, is clearly illustrated in the discussion of the term living being.⁶ Plotinus inquires whether it is the body—physical, instrumental, and potential—or a combination of body and soul, or some third composite nature, a duality composed of both.⁷ However this may be, the soul must either be unaffected,⁸ while it is cause to the body of such affection, or it is simultaneously affected and suffers either the same or a similar affection. If the body is an instrument used by the soul, the soul need not be affected by the bodily passions any more than an artisan by the affections of his tool. But in sense-perception there is conscious use of the sense-organs, "for the soul must use the organ while conscious of the external affections resulting from a sensation; thus seeing is to use the eyes." But in connection with visual perception, pleasure-pain is involved; furthermore, when there is some injury to the organ, the resulting pain awakens a desire for healing. (In other words, even the simplest cognitive process involves emotion and conation to a greater or less degree, and the latter processes implicate both body and soul.) But how can the affections come from the body to the soul? That would correspond to a case where one individual suffers while another suffers. So long as one is the agent

¹ *Ibid.* iv. 7, 1-4.

² *Ibid.* 5-8.

³ *Ibid.* 8.

⁴ *Ibid.* iv. 2, 1-2; 4, 1.

⁵ *Ibid.* i. 1, 1-4.

⁶ ζῶον.

⁷ *Enn.* i. 1, 4-5.

⁸ ἀπαθής.

and the other the tool, body and soul exist apart. At least he who takes for granted the agent using the instrument, makes such a separation. Before this logical distinction was made,¹ the soul was "mixed" with the body.

Hence there was some sort of mixture, either the soul was interwoven, as it were, with the body, or it was a form in some way separated, or it was in a similar relation to the body as the steersman to the rudder, or partly the one and partly the other: I mean that it is partly separated in so far as it is an agent, partly mixed as being related to that which it employs as an instrument; so that philosophy may relate it to that of which it makes use and when it is unavoidably necessary separate the agent from the tool, so that it is not continually employing the body as an instrument.²

Plotinus then discusses these suggested modes of interrelation and asserts the need of considering the sort of mixture. Perhaps it may be as impossible to unite the corporeal and incorporeal "as if one should say linear magnitude is mixed with whiteness, one nature with another."³ Thus the corporeal and incorporeal are different essences. The solution offered by Plotinus was that the soul itself remained unmixed. "Present in bodies and illuminating them, it produces living beings not from itself and the body, but remains always identical, giving images of itself just as a face in many mirrors."⁴

C. Psychology of Mental Processes and Reflective Consciousness

The first image manifested in the living being is sense-perception. The subject in this activity is "the composite nature which exists because of the presence of the soul and is produced by the soul which from the body thus constituted and from the light emanating from itself makes the nature of the living being something different, to which sense-perception and other so-called affections of the animated body belong."⁵ Since each sense-organ is fitted for a special function, in one sense the power of perception has its seat there; but all perception and movement must start in the brain where the nerves originate. Since in perception a sort of judgment is passed, it is an active process, not mere reception of impressions. For in sight, for example, we direct our vision in a straight line, and such impulse outward would be unnecessary if the object simply left its impression on the soul. Plotinus' chief argument against the passivity of sense was that we should in that case see not the objects themselves, but images and shadows of them. In

¹ πρὸ τοῦ χωρῆσαι διὰ φιλοσοφίας.

² *Enn.* i. 1, 3.

³ *Ibid.* iv. 1, 4.

⁴ *Ibid.* i. 1, 8.

⁵ *Ibid.* i. 1, 6.

the case of the other senses, Plotinus also held that a distinction must be made between the passive affections and the perception and judgment of them.¹ A remarkably acute analysis is given of vision with regard to the accidental relations of size to color and touch to vision.² The process of perception depends on physical conditions; but physical reactions cannot explain the storing-up of mental impressions. Hence memory belongs to the soul, as it is an activity of the soul, though it may start from the composite nature.³ Remembering may be incited by the activities and affections of the dual nature, but the memories are purely psychical.⁴ So, too, in pleasure-pain, the feeling belongs to the animated being, the perception to the soul. Reasoning has properly no psychical organ, for it is an activity that does not pertain to bodies, but is the peculiar life of the soul. "Thought belongs to us because the soul is mental and thought is the better life both when the soul thinks and when Reason extends its activity to us; for Reason is a part of us and we ascend to it."⁵ Error is due to the dual nature which weakens right reason, as the wisest counselor in an assembly may be overcome by the general clamor.⁶ In the faculty of productive imagination (*φαντασία*) the higher and lower processes meet, as it is the psychical organ of memory and self-consciousness.⁷ This whole psychology treatment is most obviously based on introspection and shows advance in a more definite utilization of the subjective attitude.

Plotinus first clearly made use of the conception of reflective consciousness,⁸ which had become ever more and more prominent as introspective analysis was more widely applied. Without reflective consciousness, Plotinus contended, there could be no synthesis of the impressions and in a sense no understanding. It was especially by emphasizing the unity of mental activity, as distinguished from a material process, and its synthesizing power, that he was able to develop his philosophical system. He made a clear analysis of subject and object in thought, distinguishing also between activity and content.⁹ Reflective consciousness is the peculiar characteristic of thought.¹⁰ On the other hand, lack of self-consciousness is no evidence of the absence of mental activity. Theoretical and practical activities may be unaccompanied by consciousness of them; for example, in intense reading or

¹ *Ibid.* 2.² *Ibid.* ii. 8.³ *Ibid.* iv. 6, 3.⁴ *Ibid.* iv. 3, 27.⁵ *Ibid.* i. 1, 13.⁶ *Ibid.* iv. 4, 17.⁷ *Ibid.* iv. 3, 29-31.⁸ *συναίσθησις, παρακολούθησις.*⁹ *Enn.* v. 3, 5.¹⁰ *Ibid.* ii. 9, 1; v. 1, 12.

in the performance of a brave act.¹ His introspection also taught him that self-consciousness makes activities less distinct and that the mind functions better when it is not so diffused but withdrawn within itself. Self-consciousness differs from the conscious apprehension of external objects. "The knower cannot place himself outside like an observer and gaze on himself with the eyes of the body."² This stage of reflective thought is, according to Plotinus, inferior only to the complete unification in which even thought disappears.

D. Metaphysical System Based on Psychology

In the unbroken hierarchy which Plotinus established from matter (formless, indeterminate, a mere recipient of forms) to the absolute One, universal mind (that is, intellect at one with the intelligible) is formed by the One and in turn produces the Soul of the Whole which creates all other existences. On the basis of his psychological analysis, Plotinus then declared: "As in the nature of things there are these three principles, so also with us."³ "Everything there is also here,"⁴ the "world here" being taken to signify the soul and what it contains. "There are as many formal differences as there are individuals, and all pre-exist in the intelligible world."⁵ "Not only the Soul of the Whole, but each particular soul, has all things in itself; they differ in energizing with different powers."⁶ Matter was to him a conception useful to explain evil. He defined it as "incorporeal and unextended, like a mirror that represents all things so that they seem to be where they are not and itself keeps no impression."⁷

Though Plato had suggested the identification of the spiritual with immaterial, all psychical activities were restricted to the world of becoming. Aristotle, limiting it to the divine, had attempted to unite transcendence and immanence in his doctrine of *νοῦς*, an immaterial principle entering the human being from without. These supra-scientific speculations had been set aside on account of the Peripatetic devotion to strictly scientific investigation and Academic Skepticism, while Stoic, Epicurean, and Skeptic schools had brought other doctrines into the foreground. With the development of the subjective attitude, epistemological considerations based on ethical idealism among the Stoics and in the neo-Platonic movement the predominantly religious spirit which

¹ *Enn.* i. 4, 10.

² *Ibid.* v. 8, 11.

³ *Ibid.* v. 1, 10.

⁴ *Ibid.* 9, 13.

⁵ *Ibid.* v. 7; v. 8, 4.

⁶ *Ibid.* iv. 3, 6.

⁷ *Ibid.* iii. 6, 7.

referred the Platonic dualism to the antagonism between soul and body as exemplified in ascetic practices and in the spirituality of God, had made individual personality the essential basis of philosophic interpretation. On all sides, then, a separation had been made between physical and psychological activities, that compelled Plotinus to struggle with the mind-body relation. Fluctuating distinctions were drawn by the later Stoics who accorded to the mind's interpretation and evaluation of presentations the chief importance in life. According to Plotinus, all reality is mental, and the so-called physical is an image of the soul. Moreover, the Platonic ideas were regarded by the neo-Platonists as the original thoughts of deity and as such the constitutive elements of intellectual activity, thus spiritualizing an immaterial world. Mind self-active and creative, as experienced by an individual as individual, not only began to be basal in psychology and epistemology, but as a metaphysical principle bridged the dualism provocative of the religious movement. All that really exists in the world of sense is spirit; corporeal substance is an idea as it has shaped itself in matter. Now mind did not mean mind in general, as a logical concept. The individual soul, as revealed in introspection, differed from the Soul of the Whole only in energizing with different powers. From the subjective standpoint an explanation had been given of the fundamental tenet, "Not only the Soul of the Whole, but each particular soul has all things in itself."¹ Standing at opposite poles of thought, Aristotle and Plotinus had both declared that the "soul is somehow all existing things."

Yet with the adoption of a new standpoint Plotinus maintained in fundamental details the position of Aristotelian thought. For he held that the contemplative life is higher than the practical. To the former belong freedom and self-dependence.² Practice issues from theory and returns to it. Production and action imply either the inability of thought to grasp its object adequately without going forth from itself, or else a by-product, not willed but naturally resulting from that which remains in its own higher reality. External activity whether in man or nature was, therefore, regarded as an attenuated product of contemplation.³ But Plotinus showed the influence of the new standpoint when he asserted that complete apprehension of the absolute was impossible through any forms of thought but was attained through an emotional attitude in which self-consciousness was lost.⁴ Man must of his own free will prepare for this union with deity by divesting himself of his

¹ *Ibid.* iv. 3, 6.

² *Ibid.* vi. 8, 5.

³ *Ibid.* iii. 8, 6.

⁴ *Ibid.* vi. 7; v. 3.

sensuous nature and individual will. Though the inspiration was gained only by absolute absorption of the individual into the divine, this ideal of ecstasy issued from an attempt to recognize individual experience, not only from the cognitive but from the emotional and volitional aspect.

3. PSYCHOLOGY AND METAPHYSICS OF AUGUSTINE BASED ON ANALYSIS OF WILL

Will became definitely fundamental in the psychology and philosophy of St. Augustine. He turned to the inner world of individual experience and there found a means to reconcile religious dogmas with philosophical tenets by emphasizing will in preference to intellect. Thus he discovered the basis of all knowledge of God and of the human soul; for the scrutiny of his own personality revealed will as the essence of reality. Augustine was impelled to this psychological analysis by the problem of evil which had been steadily growing in importance in the consciousness of men and more urgently pressing for solution. He first sought an answer in Manichaeism, then in Skepticism; neo-Platonism seemed to offer a more satisfactory explanation, but finally free-will appeared to solve the problem.¹ The more he considered the matter, the more this point of view appealed to him. Instead of stopping with a mere assertion, he began to defend and strengthen his position by psychological analysis.

Augustine seeking a starting-point for his philosophy made individual experience as such the basis and contrary to the opinion of the Skeptics he found a way to certainty in doubt. Against the Academy in particular, he urged, as Antiochus had done, that probability presupposes certitude.² Though familiar with illusions, dreams, and other favorite arguments of the Skeptics,³ he maintained that when one person says a certain object is perceived and another denies it, the dispute is in fact a matter of terms as long as something is perceived. Doubt itself furnishes a strong foothold for certainty, for it implies the reality of the conscious being.⁴ The soul is the whole personality, a living unity; by its very existence and self-consciousness, it is certain of its own reality as the most incontrovertible truth.

From Platonism Augustine adopted the theory of the dualism between two worlds, the intelligible in which truth dwells, and the sensible which we experience through the senses and which affords only probable

¹ *Conf.* viii. 3, 5.

³ *Ibid.* iii. 24.

² *Contr. Ac.* ii.

⁴ *De Tr.* xv. 21; x. 12-14.

grounds of certainty.¹ Through sense-perception the external and spatial world is perceived; that which is conceived through reason is non-spatial and is located in the knowing mind.² The understanding transfers sense experience into knowledge and thus forms an intermediary between sense and reason. The information given by the senses concerns changeable objects³ which therefore cannot be grasped by reason which alone gives absolute certainty. When the object is beyond the province of intellect or sense, speculations to which it gives rise are baseless and trifling.⁴

But in spite of this Platonic tendency, Augustine fully acknowledges the importance of empirical knowledge.⁵ In his detailed study of sense-perception he lays the foundation of one of the processes by which the mind arrives at the knowledge of intelligible objects and finally of God. The objects of our awareness are of two kinds, the external objects of sense and the mental activities apprehended by the internal sense which also distinguishes objects of the external sense.⁶ The object as visually perceived is an object of the external sense; the seeing, itself, of the internal sense. Without the latter sense, we should be unable to influence our sense-organs; for we would not open our eyes to see unless we knew that by lifting the eyelids, the rays of light are permitted to stream in, nor close our eyes to avoid some unpleasant sight unless we believed that by so doing we should be unable to see. Here a distinct emphasis is laid on the volitional and purposive aspect.

This prominence of will becomes even more evident in his detailed psychological treatment. In every form of sense-perception there are three factors: for instance in vision, the visible object which may exist before it is seen; the act of seeing which did not exist before the object was seen; the attention of the mind, the act of will which directs the sense-organ toward the object and keeps the attention fixed during the act of perception.⁷ Augustine made further advance by noting that for an act of will, reflective consciousness is an essential requirement. External objects may make impressions that remain unnoticed. Thus he had found himself reading a letter without knowing what he read, "the will being fixed on something else and consciousness not being so applied to the bodily sense as the latter to the letter." So also, when conversing, we may be thinking of something else and not observe the

¹ *Ibid.* iii. 37.

² *De Gen.* xii. 15.

³ *De Div. Quaest.* 83, 9.

⁴ *Epist.* 13, 2.

⁵ *De Tr.* xii. 1.

⁶ *De Lib. Arb.* ii. 10.

⁷ *Epist.* 137, 5; *Trin.* xi. 2, 5.

words of the speaker. "We hear the words but are not conscious of them, because, as the words fall upon our ear, the act of will by which they are wont to be impressed in consciousness is absent. It is nearer the truth to say that we are not aware of the words, than that we do not hear them."¹ Thus Augustine gives a psychological explanation of phenomena that had been previously noted by Aristotle and commented upon by Plotinus. An act of will explained to Augustine how the countless forces impinging on our sense-organs are brought to consciousness. Hence the will has a twofold function to perform in sense-perception: to make sense-impressions into objects of consciousness, and through attention to transform an immediate into a cognitive experience.

Augustine also found will to be the essential element in imagination. This reproductive activity of the internal sense likewise presents three factors: memory,² which with its contents received through sense, corresponds to the external world in the process of sense-perception; an image of the thought-object; an act of will which directs the attention to the image and makes it an object of consciousness. When we cease to attend to this presented object, it disappears as a thing of which we are aware, but is still retained in memory until called forth by another act of will.³ The will is still more influential in productive imagination. In this field the will is free to build its fanciful structures and error results when these are interpreted as actual objects.⁴

A study of thought revealed to Augustine a similar significance of will. He distinguished a twofold aspect of reason, the one concerned with corporeal and temporal objects and the other with the intelligible world.⁵ Still he guarded carefully against the interpretation of any real separation of the mind into two parts. Practical reason presupposes certain premises and standards. In order to proceed from presuppositions beyond the immediate content of knowledge, will must be in evidence as a desire for inquiring and investigating. Thinking is therefore a willed act of thought.⁶ Augustine struggled manfully with the problem of their relation. He acknowledged that we would not seek a thing we know, but also that it is impossible to will the unknown. The solution of the problem seemed to him to be that an act of will must have reference to something partly known; and because our knowl-

¹ *Trin.* xi. 15.

² *Memoria* denotes both memory and awareness: *Trin.* xiv. 14.

³ *Ibid.* xi. 6-8.

⁵ *Ibid.* xii. 2-3; *ratio, mens.*

⁴ *Ibid.* 17.

⁶ *Ibid.* ix. 18.

edge is partial, the will drives us to know more. On this basis will is superior to practical reason.

In its contemplative function, reason deals with the objects of the intelligible world, the supreme principles of thought and conduct. It is somewhat difficult to interpret Augustine's position, as it underwent various changes.¹ At first he held the Platonic theory of reminiscence; but finding it impossible to reconcile it with his religious views, he identified the neo-Platonic *νοῦς* with the *λόγος*, divine wisdom. Then Augustine contended that the will directs the activity of practical reason in bringing the data of the outer and inner sense under the principle of rational insight, but that knowledge of these principles is essentially revelation. For here divine grace and personal faith both enter in. The illumination of the individual consciousness by the eternal truths, the prototypes of concrete existences, is an act of grace, in which the human mind lacks the initiative power.² The attitude of the individual, however, is also important. Such rational insight is bestowed only on the person who by his efforts shows himself worthy of the privilege. Then, too, faith rather than insight effects the appropriation of these principles, and faith contains the factor of assent, determined by no intellectual compulsion. Thus in all psychical activities Augustine held the volitional attitude as basal. Like Plotinus he recognized the interrelation of conative, cognitive, and affective elements and found a solvent for his psychological problems in will.

Augustine's analysis of error also gives evidence of the prominence of will. External objects present themselves just as they are, and the sense-organs merely receive the impulse from without, having no power to make any alterations.³ "Corporeal appearance, because it has no will, does not lie or deceive; nor do the eyes deceive, for they cannot report to the mind anything but their affection. So it is with the other senses. If anyone thinks the oar in the water is broken, he does not have a poor messenger, but a poor judge."⁴ Error, then, is caused by the will which too hastily and indiscriminately refers the impressions to some object without due consideration of the subjective factors.

Thus the subjective standpoint became dominant in psychology by the recognition of the significance of unconscious elements, by emphasis on the object of knowledge as the object of attention, the importance of will in error, the identification of thinking with an act of will, and the discovery of the essence of personality in the conative attitude.

¹ *Ibid.* xii. 24; *De In. An.* 34; *Retract.* i. 8.

² *De Civ. Dei* viii. 1.

³ *De V. Rel.* 61.

⁴ *Con. Ac.* iii. 26.

Not only was the inmost reality of the human being ascribed to will, but the grounds of all reality were discovered in psychical activity. For according to Augustine the one form of knowledge ascends from sense-data to the highest principles; the other, more noble, consists in the study of the inner mental activity which reveals these norms of reason, invariable and universal. As changeless forms of all reality they are ideas in God who is the sum and source of all truth. Although complete knowledge of God is unattainable, all rational knowledge is ultimately of God. Hence the deity is the essence of all truth and also the absolute personality who can be comprehended only by self-knowledge of the finite personality. The three aspects¹ of psychical reality, conscious presentation, understanding, and will, are also the categories of all reality, being, knowing, and willing which are encompassed by the omnipresence, omniscience, and absolute perfection of God. So in a knowing and willing personality, Augustine discovered not only the fundamental psychical principles, but the highest metaphysical and religious reality.

¹ *Memoria, intellectus, voluntas, or esse, nosse, velle.*

V. SUMMARY

In conclusion, some of the main phases in the development of the subjective attitude may be summarized. The problem of knowledge was a product of the consciousness of the contradictions involved in the philosophic systems on the one hand, and of the uncertainties incident to the disruption of customs and beliefs on the other. These made an examination of the grounds of knowledge imperative. During the pre-Socratic period, a most significant change in the philosophical standpoint had been brought about, from the view of matter as the intelligible phase of nature to that of form as alone knowable. Socrates found that a more thorough examination of self brought to light universal and permanent elements of knowledge. Plato accepted his results and endeavored to mediate between the world of being and becoming, but it never occurred to him to find justification for the universal in the world of becoming. Aristotle treated more definitely psychological problems than Plato, but his exposition was mainly biological. Taking his stand on the reality of the individual and the necessity of the universal for knowledge, he worked out a theory of knowledge that was thoroughly objective and realistic. Thus the emphasis fell on external control and on mind in its outer manifestations. When the attention began to center not on the type, but on personal will and assent, on the individual as individual, the need of control and of a criterion became apparent. It was during the investigations of this problem by the post-Aristotelian schools, while they tried to recognize more adequately the ever-widening and diversifying demands of individual personality, that the subjective point of view developed.

Building upon the cardinal assumption of immanence—the identity of the nature of man and that of the universe—the most significant innovation of Stoicism's founder, Zeno, consisted in the insistence upon voluntary assent and the establishment of a theory of knowledge on the presentations that give certain knowledge of reality. His basal concept was agreement, harmony of the inner and outer, the individual and the universe, so that when such a presentation was given, the mind necessarily assented. The universal aspect was emphasized by Cleanthes, who defined the agreement by the physical theory of tension. This predominance of the psycho-physical point of view forced Chrysippus, when the Stoics were assailed by the Skeptics, to recognize more defi-

nitely the human individual and to resort to psychological analysis in the attempt to base a theory of knowledge on voluntary assent. The interest was thus transferred from the object of knowledge to the process of attention. Influenced by Skeptical criticism of the given infallible criterion, the Middle Stoa turned to a scrutiny of the formation of the judgment and accorded the individual a greater share in determining a standard.

The Pyrrhonists had assumed the ultra-subjective standpoint but had at the same time renounced all epistemological problems and attempted to find the goal of all endeavor in this very attitude. Practical exigencies forced them first to recognize and interpret their affections. Then Arcesilas, though denying a theoretical criterion of certitude, was compelled to appeal to the "reasonable," or "probable," as the standard of practice, thus referring the decision to individual interpretation. In the controversy between Carneades and the dogmatic schools, the analysis of attention wrought remarkable changes in the view generally held of the criterion and method of verification. The grounds of certainty were examined and the "special sign" of the Stoic, *φαντασία καταληπτική*, was shown to depend for its validity on the individual's investigation of all circumstances connected with the act of cognition. From the Skeptic assault, especially that of Carneades, on the criterion of truth which involved criticism of the grounds of ethics, religion, and all scientific demonstration, and from the resulting restatement of the dogmatic position, three definite philosophic movements can be traced: a transformed Stoicism, neo-Platonism, and Skeptical Empiricism.

Epicurus had started on an empirical basis to give a logical exposition of atomistic physics. His ethical principle of free-will made it absolutely necessary that the sense-data be trustworthy, for reason might add, subtract, combine; and therefore empirical certitude would otherwise be problematical. Hence he inevitably insisted on the criteria, sense and affection, and on the natural development of preconceptions. Everything that was directly experienced was tested by these infallible standards. Only in reference to matters unknown was reason brought into play, not through formal demonstration but by calculation from observed to unobserved that could not be disproved by future experience or at least not refuted by actual experience. Thus by giving thought a more dignified and influential position than was accorded it by sheer sensationalism, Epicurus introduced the subjective attitude as a solvent for problems. But no attempt was made to determine the

modes of operation of the voluntary rational activity upon the matter of affection and sense in valid inference. To Epicurus, as to the earlier Stoics, the objects of sense and thought were given completely and the manipulating activity was guaranteed by the uniformity tacitly assumed. As the Stoics had modified brute nature by the conception of rational activity, so Epicurus, besides the rigid mechanism of pure atomism, introduced free-will, both evidence of the growing appreciation of personality.

The widening influence of psychological analysis combined with Skeptical criticism made the later Epicureans give added weight to reasoning. As Epicurus had advanced on sheer sensationalism by assigning awareness of sense and thought presentations to the understanding and more particularly discriminating sense from thought not only by the kind of objects but by difference in function, so his followers made further progress by maintaining that preconceptions are needed to grasp the simplest notions and finally that reasoning and inference are involved in all cognition. Thus a sounder scientific method began to be formulated as a result of the psychological analysis that had been aroused especially by the stringent arguments of the Skeptical academy.

When philosophy began its investigations into the underlying principles of ethics, metaphysics, and the special sciences, mathematics furnished the ideal of certainty and of method. The habit of making exact definitions and drawing deductions from them, fostered by the discussions in which the Greeks were masters, developed into a passion for demonstration. At the Socratic period, a great body of solutions to a variety of problems had been accumulated. Then during the upheavals of the Sophistic movement, practical problems arose in which these propositions were used and had to be analyzed into their presuppositions, and scientific thought became conscious of itself. Thus there existed a series of political and ethical postulates, and the art of the Sophists consisted in showing how these traditional dicta of the community might be analyzed into more fundamental axioms and how cases might be presented effectively on this basis. Such is the type of analysis that prevails in Aristotle. Parallel with this logical development is the work of Euclid, in collecting different solutions and tracing these back to axioms and postulates, thus giving novel demonstrations. But when moral and political problems began to be argued, it was found that verbal agreement did not necessarily imply complete agreement in meaning and that the wider the generalization, the greater the opportunity for variation. So inferences came to be regarded as

expressions of individual belief and conviction and therefore the determination of the criterion was most important. Aristotle showed that the same degree of certainty cannot be attained in practical disciplines as in the mathematical sciences, still the ideal of method was retained. When the universal was discovered, the work of the scientist was completed, for every experiment was then merely an instance under the general proposition.

After the academy had returned to a dogmatic position at the ascendancy of Antiochus, the Skeptics took up the formal destructive criticism of the dogmas maintained fixedly and often uncritically by the other schools, and, by their demolition of the validity of sense-perception, demonstration, and all reasoning by deductive analysis, aided the Empirical physicians to build up an inductive method. While the Skeptics proper, despairing of theoretical certitude, devoted their attention to practical pursuits, the Empirics developed their special art by constructing hypotheses founded on observation and verified by experience. So the interpretation of the changing conditions of disease and the variable effects of remedies grew into a procedure of individual analysis and testing. Accordingly the value for knowledge of individual experience was recognized and the universal became subject to experimentation as the fact and not the unknown appeared to be the problem. Gradually, however, by reliance on recorded observations and the authority of such physicians as Galen, the rules thus discovered became stereotyped into fixed principles of the art of medicine. A similar congealing process was also affecting all other lines of thought and activity during the last centuries of the Roman Empire.

From the concessions made to the criticisms of Carneades, a Stoicism that had reinterpreted the doctrines of the older leaders gradually emerged. Reason as analyzing and weighing evidence, not merely giving assent of necessity, became the criterion. The universal rational law transformed by religious emotions became the inner self, the ideal, potentially bestowed on all, but in actuality a character that could be degraded or elevated by individual effort. The effect of such a change is evident in the doctrine of different stages of progress and in the importance placed on the evaluation of experience. The divine was during the later period not primarily a formal law, but an indwelling spirit. In Seneca and Epictetus the individual aspect predominated, in M. Aurelius, the cosmic. For all, "the little field of self" was the ultimate reality.

In neo-Platonism, the spiritual monism, which had been develop-

ing on the moral and religious side in later Stoicism in conflict with a material ontology, became a metaphysical system. All knowledge was held to be of the immaterial and spiritual, but only the images of the absolute were cognitively apprehended; union with reality itself could be achieved only through an emotional state that surpassed all knowledge. Augustine based his philosophy on the absolute certainty of a conscious mind. In psychical activity in its various forms he discovered the principles of reality. The essence of personality was to him the undetermined will and for that reason he located there the conflict between the universal and the individual as well as its solution.

Thus in this period, the individual, who is the focus of interest, is at first set over against the permanent unchanging universal in the theory of knowledge, in scientific method, in ethics, in politics, and in religion. As the individual tries to readjust himself to this external control, the internal control develops, and in turn reinterprets the universal, until the ideal of knowledge finally becomes not a reproduction of external reality but a harmonious organization of inner experience through which the external meaning is also interpreted.

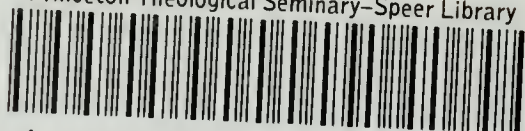
The development can be traced briefly in the growth of the term *φαντασία*. Originally identified indefinitely with either sense or thought, it was by Aristotle used for presentation in sense-perception and conception and, as a technical term, for imagination. Stoics and Epicureans at first emphasized the sensuous presentation, then the thought-image, both defined in material terms. At the same time the Stoics labored with the import of judgment and meaning. All signification they held to be incorporeal and acknowledgment to be given not to the symbol or the thing signified, but to the meaning expressed by the proposition. Then as the importance of the inner experience increased, *φαντασία* came to mean not only the image, but also the value attached by the mind to things perceived or conceived. It was not the unknown that called for explanation. Things presented ask questions of the mind, said Epictetus; and then all reality must consist in the answer given by reason. In the words of M. Aurelius, the view taken is everything. For neo-Platonism all cognitive objects were images of the absolute and all reality was mental. St. Augustine discovered that in all stages of knowledge the object must be in consciousness and that will is the determining factor.

But as the individual had reinterpreted reality in the political, social, religious, moral, and cognitive realms, the new universals again became the fixed standards to which he must accommodate himself

as expressed for him in the authority of philosophy, science, state, and church. The practical problems could again be solved with reference to stable standards, and so for Augustine the theoretical which had been the fading ideal for actual life became the good attained in the future life. "Somehow the soul is all existing things," said Aristotle. It was the investigation of this "somehow" that formed the problem in epistemology and scientific method, in morals and religion; and through this analysis the point of view shifted from the external to the internal. Here finally in the subjective attitude was found the control which determined all aspects of life.

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